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RADC-TR-83-314, Vol II (of two) Final Technical Report February 1984



AD-A141 632

SREM EVALUATION Specifications and Technical Data

Martin Marietta Denver Aerospace

A. Stone, D. Hartschuh and B. Castor

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ROME AIR DEVELOPMENT CENTER Air Force Systems Command Griffiss Air Force Base, NY 13441



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RADC-TR-83-314, Volume II (of two) has been reviewed and is approved for publication.

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FOR THE COMMANDER: John O.

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RADC Project Engineer: William E. Rzepka (COEE)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

In the fall of 1980, the Rome Air Development Center contracted Martin Marietta Denver Aerospace to perform a comprehensive evaluation of the Software Requirements Engineering Methodology (SREM). The objectives of the evaluation were to assess the capabilities of SREM for specifying the software requirements of large, embedded computer systems and to recommend improvements which would enhance its effectiveness. Specific evaluation criteria were developed to judge the effectiveness of the methodology,

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support tools and user training.

The approach included attending a SREM training course and using SREM to specify the software requirements for two Air Force systems. One of these was a large distributed computer system whose 515 page, English language system description resulted in 35,550 lines of formal requirements specification with over 3000 data base elements. The relatively small number of errors uncovered indicates the effectiveness of disciplined requirements analysis techniques and the capabilities of SREM for exposing subtle problems.

In general, it was found that the SREM was an effective vehicle for specifying and analyzing the software requirements of large embedded computer systems, especially descriptions of real world objects, data requirements and message processing. However, deficiencies were noted in the specification language, particularly in describing parallel and distributed processing requirements, in the "friendliness" of the user interfaces to the analysis (consistency/completeness) and simulation tools, in the performance of these tools and in the effectiveness of the training. Appropriate improvements to all of the functional deficiencies are recommended.

Foreword to Volume II

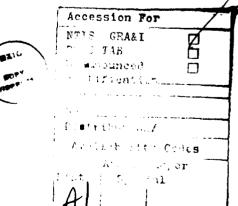
These appendices to the SREM Evaluation Final Technical Report contain several classes of data from which the discussion, results, and conclusions of the project were, in part, derived. The intent is to provide examples of the types of information that were available or developed rather than provide an exhaustive compendium of all the data involved.

The sequence of the appendices roughly follows the time line approach undertaken in the project which is also analogous to a standard life-cycle development sequence. The SREM RSL description of the NELS system in Appendix A is followed by graphic design charts (Nassi-Schneiderman diagrams + module hierarchy descriptions) in Appendix B. This appendix contains both versions of the NELS design, one derived directly from the SREM data and one derived in conventional fashion directly from the NELS specification.

Appendix C shows the results of performing SREM analyses on an ASSM using the REVS program. Two types of analysis are shown, data element and data flow. These were used to validate the NELS definition. REVS can also be used to generate information for a MIL-STD 490 type B5 specification. This is provided in Appendix D.

In evaluating the simulator portion of SREM, only selected subsystems of the NELS were used. Appendix E contains the simulator generation for one of these, also named N-E-L-S, beginning with the Pascal code for the Simulator Definition File (SDF) and followed by the REVS-generated simulator program.

Appendixes F and G provide supplementary information concerning the VAX-based SREM software and its installation, and the design quality measures that were used to compare the effectiveness of alternative design schemes in assessing the effectiveness of the SREM technique.



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APPENDIX A

NELS ASSM

```
DATAL
            D+081+A+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA
     DATAS
            D+082+A+NFLS+EMITTER«VEL+X+DATA
      DATAS
             D+083+A+NELS+EMITTER+VEL+Y+DATA
             D+084+A+NFLS+EMITTER+VEL+Z+DATA
      DATAS
     DATA:
            D+085+A+NELS+EMITTER+X+DATA
     DATAL
            D+086+A+NELS+EMTTTEP+Y+DATA
      DATA:
             0+087+A+NELS+EMITTEP+Z+DATA
      DATA:
             D+117+PLATFORM+MOD+X+DATA
      ATA
            D+118+PLATFORM+MOD+Y+DATA
      DATA:
            D+119+PLATFORM+MOD+Z+DATA
     DATA:
            D+130+4+SCENARIO+GEN+ID+NUM+DATA
            D+133+SECOND+CMDKS+REG+UPDATE+DATA
     DATA
     DATA:
            D+139+TASK+QUE+ID+DATA
      DATA: D+143+X+LOC+FEASIBLE+DATA
      DATA: D+145+Y+LOC+FEASIBLE+DATA.
[RADX COMMAND=
LIST ALL.
   ALPHA:
          A+01+DME+INS+NOISF+GENERATION+ALPHA.
        PETAL
        "BFGIN
     D+018+ASP+PITCH+DATA := D+018+ASP+PTTCH+DATA + 0.01
     ID+019+ASP+ROLL+DATA := D+019+ASP+ROLL+DATA = 0.01
     ;D+025+ASP+YAW+DATA := D+025+ASP+YAW+DATA + 0.01
     #P+010+ASP+ALTITUPE+DATA := D+010+ASP+ALTITUDE+DATA - 0.01
     IN+012+ASP+LATITUDE+DATA := D+012+ASP+LATITUDE+DATA + 0.01
     ID+017+ASP+LONGITUDE+DATA := D+017+ASP+LONGITUDE+DATA = 0.01
     :C+014+ASP+LOC+X+DATA := D+014+ASP+LOC+X+DATA + 0.01
     ID+015+ASP+LOC+Y+DATA := D+015+ASP+LOC+Y+DATA - 0.01
     ID+016+ASP+LOC+Z+DATA I= D+016+ASP+LOC+Z+DATA + 0.01
     ID+021+ASP+TIME+DATA := D+021+ASP+TIMF+DATA = 0.01
     ID+022+ASP+VEL+X+DATA IR D+022+ASP+VEL+X+DATA + 0.01
     ID+023+ASP+VEL+Y+DATA := D+023+ASP+VEL+Y+DATA = 0.01
     JOHOZ4+ASP+VEL+Z+DATA := D+024+ASP+VEL+Z+DATA + 0.01
   END,"
        DATE+ENTERED: 11182.
        DESCRIPTION:
                "MODELS SENSOR PLATFORM ACTIVITY BY ASSUMING THAT DME
      FRPORS APE GAUSSIAM DISTRIBUTED WITH A CONSTANT MEAN, AND INS
      ERRORS ARE ZERO MEAN GAUSSIAN DISTRIBUTED".
        ENTEPED+BY: "JJF-NELS".
        GAMMAI
          "VAR SSRAND : REAL
       FUNCTION SSRANDU : REAL
           SSRAND := 29.0 * SSPAPD + 357.0
           :SSRAND := SSRAND - TRUNC(SSRAND)
           ISSPANDU I= SSRAND
          END
       FUNCTION SSSIGN : REAL
         IREGIN
           IF SSRANDU < 0.5 THEN SSSIGN := -1.0
```

ELSE SSSIGN := 1.0

END

```
* REGIN
       SSRAND := 0.801463
      ID+018+ASP+PITCH+DATA :=
         D+018+ASP+PITCH+DATA + SSSIGN * SSRANDU
      10+019+ASP+ROLL+DATA :=
         D+019+ASP+ROLL+DATA + SSSIGN * SSRANDU
      ID+025+ASP+YAW+DATA :=
         D+025+ASP+YAW+DATA + SSSIGN * SSRANDU
      ID+010+ASP+ALTITUDE+DATA :=
         D+010+ASP+ALTITUDE+DATA + SSSIGN * SSRANDU
      ID+012+ASP+LATITUDE+DATA 1=
         D+012+ASP+LATITUDE+DATA + SSSIGN * SSRANDU
      ;D+017+ASP+LONGITUDE+DATA :=
         D+017+ASP+LONGITUDE+DATA + SSSIGN * SSRANDIJ
      #D+014+ASP+LOC+X+DATA ##
         D+014+ASP+LOC+X+DATA + SSSIGN * SSRANDU
      ID+015+ASP+LOC+Y+DATA IE
         D+015+ASP+LOC+Y+DATA + SSSIGN * SSRANDU
      ID+016+ASP+LOC+Z+DATA :=
         D+016+ASF+LOC+Z+PATA + SSSIGN + SSRANDU
      ID+022+ASP+VEL+X+DATA 1=
         D+022+ASP+VEL+X+DATA + SSSIGN * SSRANDU
      ID+023+ASP+VEL+Y+DATA IE
         D+023+ASP+VEL+Y+DATA + SSSIGN * SSRANDU
      ID+024+ASP+VEL+Z+DATA II
         D+024+ASP+VEL+Z+DATA + SSSIGN * SSRANDU
     END: ".
     INPUTS:
          DATA: D+011+ASP+ATTITUDE+DATA
          DATA:
                 D+013+ASP+LOCATION+DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     OUTPUTS:
          DATA: D+011+ASP+ATTITUDE+DATA
          DATAS
                D+013+ASP+LOCATION+DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+GENERATE+NOISE.
     REFERRED BY:
          SUBNET: S+4+MODEL+NELS+PLATFORM+SUB.
       A+02+GENERATE+DME+ALPHA.
     BETA:
           "BEGIN
  D+021+ASP+TIME+DATA := D+141+TIME+DATA
  SELECT FIRST RECORD FROM
          F+06+FLIGHT+PRUFILE+FILE
  JD+014+ASP+LOC+X+DATA := D+041+FLIGHT+WAYPDINT+X+DATA
  ID+015+ASP+LOC+Y+DATA IE D+042+FLIGHT+WAYPUINT+Y+DATA
  ID+016+ASP+LOC+7+DATA := D+043+FLIGHT+WAYPUINT+7+DATA
  ID+022+ASP+VEL+X+DATA := 0.0
  10+023+ASP+VEL+Y+DATA := 0.0
  10+024+ASP+VEL+Z+DATA 1= 0.0
END;"
     DATE+ENTERED: 11182.
     DESCRIPTION:
     "GENERATES ASP (AIPBORNE SENSOR PLATFORM) STATE VECTOR".
     ENTERED+BY: "JJF-NELS".
     GAMMAI
```

```
"VAR
        SSFIRST : BCOLEAN:
   PEGIN
   IF SSFIRST THEN BEGIN
     SELECT FIRST RECORD FROM
            F+06+FLIGHT+PPOFILE+FILE
   END
   FLSE BEGIN
     SELECT NEXT RECORD FROM
            F+O6+FLIGHT+PROFILE+FILE
   END
   SELECT FIRST RECORD FROM
           F+27+PLATFORM+CONTROL+FILE
   INHILE (D+041+FLIGHT+WAYPOINT+X+DATA <> D+014+ASP+LOC+X+DATA)
     AND (D+042+FLIGHT+WAYPOINT+Y+DATA <> D+015+ASP+LOC+Y+DATA)
     AND (D+043+FLIGHT+WAYPOINT+Z+DATA <> D+016+ASP+LOC+Z+DATA) DO
     REGIN
       SELECT NEXT RECORD FROM
              F+27+PLATFORM+CONTROL+FILE
     END (*WHILE*)
     : (* ASSIGN VALUES TO ASP STATE VECTOR DATA *)
     D+014+ASP+LOC+X+DATA := D+041+FLIGHT+WAYPOINT+X+DATA
     ;D+015+ASP+LOC+Y+DATA := D+042+FLIGHT+WAYPOINT+Y+DATA
     ID+016+ASP+LOC+Z+DATA I D+043+FLIGHT+WAYPOINT+Z+DATA
     :0+021+ASP+TIME+DATA := CLOCK+TIME
     :D+022+ASP+VEL+X+DATA := D+022+ASP+VEL+X+DATA
     10+023+ASP+VEL+Y+DATA := D+023+ASP+VEL+Y+DATA
     10+024+ASP+VFL+Z+DATA := D+024+ASP+VEL+Z+DATA
   END: ".
     INPUTS:
          DATA: D+003+ASET+MSG+ID+DATA
          DATA: D+141+TIME+DATA
FILE: F+06+FLIGHT+PROFILE+FILE
          (* USED TO GENERATE DME *)
          FILE:
                F+27+PLATFORM+CONTROL+FILE.
     OUTPUTS:
          DATA: D+003+ASFT+MSG+ID+DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+GENERATE+DME
          ORIGINATING+REQUIREMENT:
          OFIG+REG+GENERATE+PLATFORM+MEASUREMENTS.
     REFERRED BY:
                   5+4+MODEL+NELS+PLATFORM+SUB.
          SUBNET:
ALPHA:
       A+03+GENERATE+INS+ALPHA.
     RETA:
     "BEGIN
  D+018+ASP+PITCH+DATA := 0.0
  ID+019+ASP+ROLL+DATA IT 0.0
  10+025+ASP+YAW+DATA 1= 0.0
  ID+010+4SP+ALTITUPE+DATA := D+014+ASP+LOC+X+DATA
  :D+012+ASP+LATITUDE+DATA := D+015+ASP+LOC+Y+DATA
  JD+017+ASP+LONGITUDE+DATA := D+016+ASP+LOC+Z+DATA
END;".
     DATE+ENTERED: 11182.
     DESCRIPTION:
             "GENERATES INS (INERTIAL NAVIGATION SYSTEM)
```

```
MEASUREMENTS".
ENTERED+BY: "JJF=NELS".
     GAMMA:
       "CONST CENTLAT # 45.0
             JCENTLONG = 20.0
       IVAR SSRAND : REAL
    FUNCTION SSRANDU : REAL
      PEGIN
        SSRAND 1= 29.0 + SSRAND + 357.0
        :SSPAND := SSRAND - TRUNC(SSRAND)
       :SSRANDU := SSRAND
       FNP
       :FUNCTION SSSIGN : REAL
         BEGIN
           IF SSRANDU < 0.5 THEN SSSIGN := -1.0
           ELSE SSSTGN := 1.0
         END
       :BEGIN
         SSRAND ## 0.63904
         ;D+010+ASP+ALTITUDE+PATA := D+016+ASP+LOC+Z+DATA
         +D+012+ASP+LATITUDE+PATA +=
            D+015+ASP+LOC+Y+DATA / 60.0 + CENTLAT
         ;D+017+ASP+LONGITUDE+DATA :=
            D+014+ASP+LOC+X+DATA / 60.0 + CENTLONG
         ;D+018+ASP+PITCH+DATA := + SSSIGN + SSRANDU
         ;D+019+ASP+ROLL+DATA := + SSSIGN * SSRANDU
         10+025+ASP+YAH+DATA : + SSSIGN + SSRANDU
     END: ".
     INPUTS:
          DATAS
                De013+ASP+LOCATION DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     <b>OUTPUTS:
                D+011+ASP+ATTITUDE+DATA
          DATAS
          DATA: D+013+ASP+LOCATION+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+INS.
     REFERRED BY:
                  S+4+MODEL+NELS+PLATFORM+SUR.
          SUBNET:
       A+04+INITIALIZE+NELS+ALPHA.
ALPHA:
     RETA:
            "BEGIN
    FOR EACH F+16+NFLS+EMITTEP+FILE RECORD DO BEGIN
      CREATE F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE RECORD
      10+063+8+NELS+EMISSION+START+TIME+DATA 18
          D+063+A+NELS+EMISSION+START+TIME+DATA ;
        D+064+NELS+EMISSION+STOP+TIME+DATA :=
          D+064+A+NELS+EMISSION+STOP+TIME+DATA:
       D+082+NELS+EMITTER+VEL+X+DATA :=
          D+082+A+NFLS+EMTTTER+VEL+X+DATA:
       D+083+NELS+EMITTER+VEL+Y+DATA :=
          D+083+4+NELS+EMITTER+VEL+Y+DATA;
       D+084+NELS+EMITTER+VFL+Z+DATA :=
          D-OR4+A+NELS+EMITTER+VEL+Z+DATA;
        D+073+8+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
          D+073+A+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA:
        D+075+B+NELS+FMITTER+ID+DATA 18
          D+075+A+NELS+EMITTER+ID+DATA:
```

```
D+085+B+NELS+EMITTER+X+DATA 1=
        D+085+A+NELS+EMITTER+X+DATA;
     D+086+B+NELS+EMITTER+Y+ .ATA I=
        D+086+A+NELS+EMITTEP+Y+DATA ;
     D+087+B+NELS+EMITTER+Z+DATA 1=
        D+087+A+NELS+EMITTER+Z+DATA ;
     D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+081+A+NELS+EMITTER+TRANSM'SSION+FREQUENCY+DATA :
     D+130+B+SCENARIO+GEN+ID+NUM+DATA :=
        D+130+A+SCEMARIO+GEN+ID+NUM+DATA
 END ENDFOREACH
 CREATE F+06+FLIGHT+PROFILE+FILE RECURD
    ID+041+FLIGHT+WAYPOINT+X+CATA := 0.0
    ID+042+FLIGHT+WAYPOINT+Y+DATA := 0.0
    ID+043+FLIGHT+WAYPUINT+Z+PATA I= 0.0
  ICREATE F+27+PLATFORM+CONTROL+FILE RECORD
    ;D+010+ASP+ALTITUDE+DAT/ := 0.0
    IC+014+ASP+LOC+X+DATA := 0.0
    ID+015+ASP+LOC+Y+DATA := 0.0
    ID+016+ASP+LOC+Z+DATA IT 0.0
    ID+022+ASP+VEL+X+DATA I= 0.0
    ID+023+ASP+VEL+Y+DATA := 0.0
    ID+024+ASP+VEL+Z+DATA := 0.0
 ICREATE F+19+NELS+FREQUENCY+SCAN+FILE RECORD
    ID+092+NELS+FREQ+SCAN+LOWER+FREQ+DATA I= 0.0
    ID+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA := 0.0
 CREATE F+20+NELS+PRE+BRIEFED+ADI+FILE RECORD
    :D+095+NELS+PRE+BRIFFFD+ACI+FILTERING+CRITERIA+DATA :=
     WITHINGAREA
    ID+097+NELS+PRE+BRIFFFD+401+LOWER+LEFT+X+DATA := 0.0
    ID+098+NELS+PRE+BRIFFED+ADI+LOWER+LFFT+Y+DATA 1= 0.0
    ID+100+NELS+PRE+BRIFFED+ACI+UPPER+RIGHT+X+DATA := 0.0
    IN+101+NELS+PRE+BRIEFED+AMI+UPPER+RIGHT+Y+DATA := 0.0
  * CREATE F+21+NELS+PRE+BRIEFED+SDI+FILE RECORD
    ID+103+NELS+PRE+BRIEFFD+SOI+END+FREQ+DATA := 0.0
    IN+104+NELS+PRE+HRIEFED+SCI+PREQ+DATA := 0.0
    ID+105+NELS+PRE+8RIFFED+SCI+MODULATION+TYPE+DATA := MODULATED
    ID+106+NELS+PRE+BRIFFED+SCI+START+FREQ+DATA I= 0.0
 ICREATE F+15+NELS+EMITTER+CHARACTERISTICS+FILE PECOPU
    ID+067+NELS+EMITTER+BANDWIDTH+DATA := 0.0
    ID+077+4+NELS+EMITTER+MODULATION+TYPE+DATA I MODULATED
    IN+C78+A+NELS+EMITTER+POWER+LEVEL+DATA := 0.0
  ICREATE F+26+NELS+WEATHER+CONDITIONS+FILE RECORD
    ID+144+X+WEATHER+LUC+DATA := 0.0
    ID+146+Y+WEATHER+LOC+DATA := 0.0
    10+039+ELEVATION+WEATHER+DATA := 0.0
    :D+120+PRECIPITATIUN+DATA := NONE
    ID+037+CLOUP+CUVER+DATA := CLEAR
END: ".
  DATE FENTERED: 11182.
  DESCRIPTION: "MAKES TARGET AND WEATHER INFORMATION AVAILABLE".
  ENTERED+RY: "JJF-NFLS".
  GAMMAI
   "BEGIN
(* COPY NELS+FMITTE?+FILE INTO NELS+EMITTER+ACTIVITY+GROUND *)
(* +TPUTH+FILE *)
FOR EACH F+16+NELS+EMITTER+FILE RECORD DO BEGIN
  CREATE F+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE RECORD
```

```
10+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA 18
       D+071+NELS+EMITTER+DATA END ENDFOREACH
  END, ".
      CREATES:
           ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC
           ENTITY+CLASS:
                          FC+2+NELS+SCENARIO+EC
           ENTITY+CLASS:
                          FC+3+NELS+TASKS+EC
           ENTITY+CLASS:
                          EC+4+NELS+THREAT+EC
                          EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
           ENTITY+CLASS:
           ENTITY+CLASS:
                         FC+6+DETECTED+EMISSIONS+INFO+EC.
      INPUTS:
           FILE
                 F+16+NELS+EMITTER+FILE.
      OUTPUTS:
                 F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
           FILER
           FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE.
      TRACED FROM:
           ORIGINATING+REQUIREMENT: ORIG#REQ#NELS#EXTERNAL#INTERFACE.
      REFERRED BY:
           R+NET: R+2+MODFL+NFLS+SENSOR+SYSTEM+R+NET.
         A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA.
 ALPHA:
      BETA:
            "VAR DREAL : REAL (* DUMMY REAL ITEM. *)
  1 BEGIN
    FOR FACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
     ID+061+NELS+EMISSION+DURATION+DATA :=
        D+061+NELS+EMISSION+DURATION+DATA
      :D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
        D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
      10+063+NELS+EMISSION+START+TIME+DATA :=
        D+063+NELS+EMISSION+START+TIME+DATA
      10+073+NFLS+EMITTER+FREQUENCY+BANDWIDTH+DATA 1=
        D+073+NELS+EMITTEH+FREQUENCY+BANDWIDTH+DATA
      10+075+NELS+EMITTER+TD+DATA := D+075+NELS+EMITTER+ID+DATA
       ID+085+NELS+EMITTER+X+DATA :=
          D+085+NELS+EMITTER+X+DATA:
        T+086+NELS+EMITTER+Y+DATA :=
          D+086+NELS+EMITTER+Y+DATA :
        D+087+NELS+EMITTER+Z+DATA :=
          D+087+NELS+EMITTER+Z+D4TA ;
       D+081+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
      +D+130+SCEMARIN+GEN+ID+NUM+DATA 1=
        D+130+SCENARIO+GEN+ID+NUM+DATA
    END ENDFOREACH
    IFOR EACH F+20+NELS+PRF+RRIEFED+ADI+FILE RECORD DO
      DREAL := D+097+NFLS+PRF+PRTEFED+A01+LOWER+LEFT+X+DATA
    ENDFOREACH
    IDREAL IS DO014+ASP+LOC+X+DATA
    JOPEAL IM D+010+ASP+ALTITUDE+DATA
    IDREAL IS NOOTBOASPORTICHOATA
ENDI".
      DATE+ENTERED: 11182.
      DESCRIPTION:
              THE ADI FILTER REMOVES FROM THE CANDIDATE TARGET LIST
    THOSE EMISSIONS WHICH ARE LOCATED OUTSIDE OF THE ASE PRE-BRIEFED
    AREA OF INTEREST".
      ENTERED+BY: "JJF-NELS".
```

```
GAMMAE
       "VAR SSTEMPR : REAL
            ISSFILTER : BOOLEAN
   , BEGIN
      SSTEMPR := D+018+ASP+PITCH+DATA
     #SSTEMPR := D+010+ASP+ALTITUDE+DATA
     ISSTEMPR IS DOOL4+ASP+LOC+X+DATA
     #FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
       SSFILTER := FALSE
       SELECT FIRST RECORD FROM
               F+20+NELS+PRE+BRIEFED+A0I+FILE
       , WHILE FOUND AND NOT SSFILTER DO BEGIN
         IF (D+097+NELS+PRE+BRIEFED+ADI+LOWER+LEFT+X+DATA <=
           D+085+NELS+EMITTER+X+DATA) AND
           (D+100+NELS+PRF+BRTEFED+401+UPPER+RIGHT+X+DATA >=
           D+085+NELS+EMITTER+X+DATA) AND
           (D+098+NELS+PRF+BRIEFED+AOI+LOWER+LEFT+Y+DATA <=
           D+086+NELS+EMITTER+Y+DATA) AND
           (D+101+NELS+PRE+BRJEFED+A01+UPPER+RIGHT+Y+DATA >=
           D+086+NELS+EMITTER+Y+DATA) THEN SSFILTER := TRUE
         SELECT NEXT RECORD FROM
                 F+20+NELS+PRE+BRIEFED+A01+FILE
       END: (* WHILE *)
       IF SSFILTER THEN BEGIN
         DESTROY F+10+NELS+CANDIDATF+TARGETS+FILE RECORD
       END
     END ENDFOREACH
 ENDI".
     INPUTS:
          DATAS
                 D+011+ASP+ATTITUDE+DATA
          DATA:
                 D+013+45P+LOCATION+DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA
          FILE:
                F+10+NELS+CANDIDATE+TARGETS+FILE
          FILE: F+20+NELS+PRE+RRIEFED+A0I+FILE.
     DUTPUTS:
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+AOI.
     REFERRED BY:
                  S+5+MUDEL+NELS+SENSOR+SUB.
          SUBNET
       A+06+NELS+COARSE+LOCATION+ALPHA.
ALPHA:
     RETAI
            MVAR DREAL : REAL
  IREGIN
    SELECT FIRST RECURD FROM
           F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
    FOR EACH F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
     REGIN
    CREATE F+18+NELS+ESTIMATED+GROUND+TRUTH+FILF RECORD
    ID+157+NELS+EMISSION+DURATION+DATA :=
        D+157+NELS+EMISSION+DURATION+DATA
      10+158+NELS+EMISSION+START+TIME+DATA :=
        D+158+NELS+FMISSION+STAPT+TIME+DATA
      10+068+NELS+EMITTER+CEP+DATA 1= 0.5
      #P+160+NELS+EMITTER+ID+DATA #= D+160+NELS+EMITTER+ID+DATA#
        D+162+NELS+FMITTER+X+DATA :=
          D+162+NELS+EMITTER+X+DATA:
```

```
D+163+NELS+EMITTER+Y+DATA :=
        D+163+NELS+EMITTER+Y+DATA;
       D+164+NELS+FMITTEP+Z+DATA :=
        D+164+NELS+EMITTER+Z+DATA;
     D+165+SCENARIO+GEN+ID+NUM+DATA :=
       D+165+SCENARIO+GEN+ID+NUM+DATA
     IDREAL := D+058+NELS+DD+1+2+DATA
     IDREAL IM D+018+ASP+PITCH+DATA
     IDREAL := D+010+ASP+ALTITUDE+DATA
     INREAL := D+014+ASP+LOC+X+DATA
   END ENDFOREACH
 END,".
    DATE+ENTERED: 11282.
    DESCRIPTION:
            MEMITTER LOCATION ACCURACY WILL BE MODELLED AS A
  FUNCTION OF EMITTER FREQUENCY, BANDWIDTH, S/N, HARDWARE ERRORS,
  NAVIGATIONAL ERRORS, SENSOR PLATFORM GEOMETRY, PHASE NOISE AND
 CO-CHANNEL INTERFERENCE, AND CORRELATION DWELL TIMES;
THE COARSE LOCATION FUNCTION DETERMINES THE APPROXIMATE
 LOCATION OF THE ACTIVE NARROWBAND EMITTERS IN THE TUNED FREQUENCY
  BAND IN THE GEOGRAPHICAL AOI;
AN (X,Y) LOCATION ERROR COVARIANCE MATRIX IS CALCULATED
  AND USED TO GENERATE RANDOM (X,Y) ERRORS IN COARSE LOCATION,
  WHICH IN TURN ARE USED TO GENERATE AN ESTIMATE OF THE CIRCULAR
  ERROR PROBABLE (CEP)".
    ENTERED+BY: "JJF-NELS".
    GAMM \ I
      "VAR SSTEMPR : REAL
  :BEGIN
     SSTEMPR := D+018+ASP+PITCH+DATA
     ;SSTEMPR := D+010+ASP+ALTITUDE+DATA
     ISSTEMPR := D+014+ASP+LOC+X+DATA
     SELECT FIRST RECORD FROM
             F+24+NELS+TDOA+DD+FILE
     JSSTEMPR := 0+058+NELS+DD+1+2+DATA
     SELECT FIRST RECORD FROM
             F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
     SELECT FIRST RECORD FROM
             F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
     :WHILE FOUND DO BEGIN
       CREATE F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD
       ;SSTEMPR := D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
       ; C+157+NELS+EMISSION+DURATION+DATA :=
          D+157+NELS+EMISSION+DURATION+DATA
       1D+158+NELS+EMISSION+START+TIME+DATA :=
          D+158+NELS+EMISSION+START+TIME+DATA
       ;D+068+NELS+EMITTER+CEP+DATA := 0.0
       ;D+160+NELS+EMITTER+ID+DATA 1=
          D+160+NELS+EMITTER+ID+DATA;
       D+162+NELS+FMITTEP+X+DATA :=
         D+162+NELS+EMITTER+X+DATA:
       D+163+NELS+EMITTER+Y+DATA :=
        D+163+NELS+EMITTER+Y+DATA:
       D+164+NELS+EMITTEP+Z+DATA :=
        D+164+NELS+EMITTER+Z+DATA
       ;D+165+SCENARIO+GEN+ID+NUM+DATA :=
          D+165+SCENARIQ+GEN+ID+NUM+DATA
       ISELECT NEXT RECORD FROM
```

```
F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
      SELECT NEXT RECURD FOOM
         F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
   END (* WHILE *)
 END . " .
   INPUTS:
       FILE:
              F+17+NELS+FSTIMATED+EMITTER+PARAMETERS+FILE
       FILE: F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE
              F+24+NELS+TDOA+DD+FILE.
       FILE:
  OUTPUTS:
       FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
   TRACED FROM:
        ORIGINATING+REQUIREMENT:
        OPIG+REQ+EMITTER+LOCATION+ACCURACY
        ORIGINATING+REQUIREMENT:
        ORIGHREQ+NELS+COARSE+AND+FINE+LOCATION.
  REFERRED BY:
        SUBNET:
                S+3+MODEL+NELS+GPS+PROCESSING+SUB.
     A+07+NELS+FINE+LOCATION+ALPHA.
  BETA:
          "VAR DREAL : REAL
:BEGIN
 FOR EACH F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
 BEGIN
   CPEATF F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD
  ID+159+NELS+EMITTER+FPEQUENCY+BANDWIDTH+DATA:
      D+159+NELS+EMITTER+FREGUENCY+BANDWIDTH+DATA:
    D+077+NELS+EMITTER+MODULATION+TYPE+DATA 1=
       D+077+NELS+EMITTFR+MODULATION+TYPE+DATA :
    D+078+NELS+EMITTER+POWER+LEVEL+DATA :=
      D+078+NELS+EMITTER+POWER+LEVEL+DATA :
    D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA #=
      D+161+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA
    END ENDFOREACH
    :DREAL := D+018+ASP+PITCH+DATA
    IDREAL := D+010+ASP+ALTITUDE+DATA
    INREAL := D+014+ASP+LOC+X+DATA
    FOR EACH F+13+NELS+EMISSION+THREAT+TABLE+FILE RECORD DO
      DREAL := D+067+NELS+EMITTER+BANDWIDTH+DATA ENDFOREACH
    FOR EACH F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD DO
    BFGIN
      CREATE F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD
      :D+157+NELS+EMISSTON+PURATION+DATA 1#
          D+157+NFLS+EMISSION+DURATION+DATA
        ;D+158+NELS+EMISSION+START+TIME+DATA :=
          D+158+NELS+EMISSION+START+TIME+DATA
        ID+068+NELS+EMITTER+CEP+DATA 1=
          D+068+NELS+EMITTER+CEP+DATA
        ;D+070+NELS+EMITTER+CCV+DATA ## 0.5
        ;D+160+NELS+EMITTER+ID+DATA :=
          D+150+NELS+EMITTEP+ID+DATA
     1D+162+NELS+FHITTER+X+DATA 12
        D+162+NELS+EMITTER+X+PATA;
      D+163+NELS+EMITTER+Y+DATA :=
        D+163+NELS+FMITTER+Y+DATA ;
      D+164+NELS+EMITTEP+Z+DATA :=
        D+164+NELS+EMITTER+7+DATA :
```

```
D+165+SCENARIO+GEN+ID+NUM+DATA 12
         D+165+SCENARIO+GEN+ID+NUM+DATA
   END ENDFOREACH
END: ".
 DATE+ENTERED: 11282.
 DESCRIPTION:
          "THE FINE LOCATION FUNCTION IS AN ITERATIVE PROCESS
IN WHICH THE CORPELATION TIME IS INCREMENTED UNTIL THE
RESULTING CEP LOCATION ESTIMATE IS BELOW A SET THRESHOLD, OR
UNTIL THE TRANSMISSION ENDS, WHICHEVER COMES FIRST".
  ENTERED+BY: "JJF-NELS".
  GAMMAT
    MVAR SSTEMPR : REAL
1 BEGIN
  SSTEMPR := D+018+ASP+PITCH+DATA
  :SSTEMPR := D+010+ASP+ALTITUDE+DATA
  ISSTEMPR 1= D+014+ASP+LOC+X+DATA
  SELECT FIRST RECORD FROM
          F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
  SELECT FIRST RECORD FROM
          F+13+NELS+EMISSION+THREAT+TABLE+FILE
  ISELECT FIRST RECORD
          F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE
  : WHILE FOUND DO REGIN
    CREATE F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD:
   D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA:
      D+159+NELS+EMITTFR+FREQUENCY+BANDWIDTH+DATA;
    D+077+NELS+EMITTER+MODULATION+TYPE+DATA 1=
      D+077+NELS+EMITTER+MODULATION+TYPE+DATA ;
    D+078+NELS+EMITTER+POWFR+LEVFL+DATA 1=
      D+078+NELS+EMITTER+POWER+LEVEL+DATA ;
    D+161+NELS+EMITTER+TPANSMISSTON+FREQUENCY+DATA :=
      D+161+NELS+EMITTFR+TRANSMISSION+FREUUENCY+DATA
    *CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FTLF RECORD
    :D+157+NELS+EMISSION+DURATION+DATA :=
       D+157+NELS+FMISSION+DURATION+DATA
    +D+158+NELS+FMISSION+START+TIME+DATA :=
       D+158+NELS+EMISSIDN+START+TIME+DATA
    1D+068+NELS+FMITTER+CEP+CATA I=
       D+068+NELS+FMITTER+CEP+DATA
    JD+070+NELS+EMITTER+COV+DATA := 0.0
    :D+160+NELS+FMITTER+ID+DATA :=
       D+160+NELS+EMITTER+ID+DATA
    ID+162+NELS+EMITTER+X+DATA :=
       D+162+NELS+EMITTER+X+DATA;
     D+163+NELS+FMITTER+Y+DATA :=
       D+163+NELS+FMTTTER+Y+DATA :
     D+164+NELS+EMTTTER+7+DATA 18
       D+164+NELS+FMITTER+7+PATA
    :D+165+SCENARIO+GEN+TO+NUM+DATA :=
      D+165+SCENARIO+GFN+ID+NUM+DATA
    #SSTEMPR ##D+079+NFLS+EMITTER+TIME+OF+LOCATION+DATA
  END (* WHILE *)
  END:".
  INPUTS:
       DATAS
             D+011+ASP+ATTITUDE+DATA
       DATAS
              D+013+ASP+LOCATION+DATA
       DATAL
              D+020+ASP+STATE+VECTOR+DATA
```

```
FILE: F+13+NFLS+EMISSION+THREAT+TABLE+FILE
          FILE
                F+17+NELS+FSTIMATED+EMITTER+PARAMETERS+FILE
         FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
    OUTPUTS:
                F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
         FILE
         FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
    TRACED FROM:
          ORIGINATING+REQUIREMENT:
          ORIGORES-FMITTER-LOCATION-ACCURACY
          ORIGINATING+REQUIREMENT:
          ORIGHREG+NELS+COARSE+4ND+FINE+LOCATION.
    REFERRED BY:
          SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB.
ALPHA: A+OR+NELS+FREQUENCY+SCAN+OPTIMIZATION+ALPHA.
     RETAI
      "REGIN
     FOR EACH F+17+NELS+FSTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
        D+091+NELS+FRFUHENCY+SCAN+DATA IR
          D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
     ENDFOREACH
 END; ".
    DATE+ENTERED: 11282.
    DESCRIPTION:
             "FREQUENCY SCAN STRATEGY WILL BE AUTOMATICALLY
  OPTIMIZED BASED UPON THE DETECTION OF HIGH PRICKITY THREAT
  EMITTERS: THE DETECTION OF AN EMITTER WHICH EXHIBITS A
   SPECIFIC TRAFFIC TYPE COULD CAUSE THE FREQUENCY SCAN
   STARTEGY TO RE UPDATED, SO THAT THE FREQUENCY AT WHICH THE
  EMITTER IS OPERATING ON WOULD BE SCANNED MORE OFTENH.
    FNTERED+BY: "JJF-NELS".
     GAMMAS
        "BEGIN
   D+091+NELS+FREQUENCY+SCAN+DATA := D+091+NELS+FREQUENCY+SCAN+DATA
    FOR EACH F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
      D+091+NELS+FREQUENCY+SCAN+DATA :=
      D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
   ENDFOREACH
 END,".
     INPUTS:
          DATA: D+091+NELS+FPEGUENCY+SCAN+DATA
          FILE: F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE.
     OUTPUTS:
          DATA: D+091+MELS+FREGUENCY+SCAM+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SCAN+OPTIMIZATION.
     REFERRED BY:
          SUBNET: 5+3+MUDEL+HELS+GPS+PROCESSING+SUR.
ALPHA: A+09+NELS+MAKE+SENSCR+REQUESTS+ALPHA.
     RETAS
     "BEGIN
     D+005+ASET+MSG+SOURCF+DATA := NELS
    IN-004-ASET+MSG+NAME+DATA IR MM+10+NELS+SFNSOR+REQUESTS
    ID+002+ASET+MSG+DEST+DATA := ASE
    ; D+125+RED+DESTINATION+SEMSOR+ID+DATA := GPS+MELS+1
    ID+126+PED+REPORT+INFORMATION+TYPF+DATA I= FE6UNKNWNVAL
    ID4127+REG+SENSOR+TARGET+ID+OF+INTEREST+DATA IS EFGUNKNWNVAL
```

```
JD+135+SENSOR+ID+DATA := NELS+GPS+1
  ENDI".
       DATE+ENTERED: 11482.
      DESCRIPTION: "REQUEST TO ASE FOR TASKS".
       ENTERED+BY: "JJF-NELS".
       GAMMA:
        "REGIN
  D+005+ASET+MSG+SOURCE+DATA := NELS
   JD+004+ASET+MSG+NAME+DATA IN MN+10+NELS+SENSOR+REQUESTS
   :D+002+ASET+MSG+DEST+DATA := ASE
   ;D+125+REQ+DESTINATION+SFNSOR+ID+DATA := GPS+NFLS+1
   10+126+REQ+REPORT+INFURMATION+TYPE+DATA := EE6UNKNWNVAL
   1D+127+REQ+SENSOR+TARGET+ID+OF+INTEREST+DATA 12 FE6UNKNWNVAL
   10+135+SENSOR+ID+DATA := NELS+GPS+1
END: ".
      FOPMS:
            MESSAGE: M+10+NELS+SENSOR+REQUESTS+MSG+0UT.
       OUTPUTS:
            DATA:
                   D+003+ASFT+MSG+ID+DATA
                   D+125+REQ+DESTINATION+SENSOR+ID+DATA
            DATA:
            DATAS
                   D+126+REQ+REPORT+INFORMATION+TYPE+DATA
                   D+127+REQ+SENSOR+TARGET+ID+OF+INTEREST+DATA
            DATA:
            DATA:
                   D+135+SENSOR+ID+DATA.
       TRACED FROM:
            ORIGINATING+REGHIREMENT: ORIG+PEG+NELS+EXTERNAL+INTERFACE.
       REFERRED BY:
            RENET: REZEMODEL+NELS+SENSOR+SYSTEM+RENET.
  ALPHA:
         A+10+NELS+MODIFY+ORPIT+ALPHA.
       BETA:
             "VAR DREAL : RFAL
    18EGIN
      IF D+135+SENSUR+ID+DATA IN
        INELS+GPS+1, NELS+GPS+2, NELS+GPS+31 THEN BEGIN
        FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
          DREAL := D+041+FLIGHT+#AYPOINT+X+DATA ENDFOREACH
        #FOR EACH F+32+SENSOR+URBIT+MODS+FILE RECORD DO BEGIN
          CREATE F+06+FLIGHT+PROFTLE+FILE RECORD
           1D+041+FLIGHT+WAYPOINT+X+DATA 1=
              D+117+PLATFORM+MOD+X+DATA
            ID+042+FLIGHT+WAYPOINT+Y+DATA :=
              D+118+PLATFORM+MOD+Y+DATA
            1D+043+FLIGHT+WAYPOINT+Z+DATA 1=
              D+119+PLATFORM+MOC+Z+DATA
        END ENDFOREACH
      END
    END;"
       DATE+ENTERED: 11482.
       DESCRIPTION: "MODIFICATIONS TO FLIGHT PROFILE".
       ENTERED+BY: "JJF-NFLS".
       GAMMAI
          "VAR SSTEMP : EEOD+135+SENSOR+ID+DATA
      JREGIN
        SSTEMP := D+135+SENSOR+TD+DATA
        #FOR EACH F+32+SENSOR+ORALT+MODS+FILE RECORD DO BEGIN
          CREATE F+06+FLIGHT+PROFILE+FILE PECORD
          ; D+041+FLIGHT+WAYPOINT+X+DATA := D+117+PLATFORM+MOD+X+DATA
          ID+042+FLIGHT+WAYPOINT+Y+DATA IN D+118+PLATFORM+MOD+Y+DATA
```

```
JD+043+FLIGHT+WAYPOINT+Z+DATA IN D+119+PLATFORM+MOD+Z+DATA
     END ENDFUREACH
   END; ".
    INPUTS:
         DATA:
               D+135+SENSOR+ID+DATA
                F+06+FLIGHT+PROFILE+FILE
         FILE:
         FILE: F+32+SENSOR+ORPIT+MODS+FILE.
    OUTPUTS:
         FILE: F+06+FLIGHT+PRGFILE+FILE.
    TRACED FROM:
         ORIGINATING+REQUIREMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
    REFERRED BY:
          RENET: REZEMODELENELSESSORESYSTEMERENET.
ALPHA: A+11+NELS+MODIFY+TASK+ALPHA.
    PETA:
     "VAR I : INTEGER
         DREAL : REAL
 , BEGIN
   IF D+056+NEEDED+FEASIBLE+DATA IN [SOT, AOI, BOTH] THEN BEGIN
    D+139+TASK+QUE+ID+DATA := D+139+TASK+QL +ID+DATA
     10+141+TIME+DATA := D+141+TIME+DATA
     JO+138+TASKING+RESPONSE+DATA := CAN+DO
     :D+005+ASET+MSG+SOURCE+DATA 12 NELS
     :D+004+ASET+MSG+NAME+DATA := MN+13+NELS+TASKING+RESPONSES
     :D+002+ASET+MSG+DEST+DATA := ASE
     *FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
      DREAL := D+041+FLIGHT+WAYPDINT+X+DATA ENDFOREACH
     ICPEATE F+06+FLIGHT+PROFILE+FILE RECORD
       ;D+041+FLIGHT+WAYPOINT+X+DATA := D+143+X+LOC+FEASIBLE+DATA
       ;D+042+FLIGHT+WAYPOINT+Y+DATA := D+145+Y+LOC+FEASIBLE+DATA
       D+043+FLIGHT+WAYPDINT+Z+DATA := 0.0
    END
  END:"
    DATE+ENTERED: 11482.
    DESCRIPTION:
            *MODIFIES FLIGHT PROFILE TO ALLOW, IF POSSIBLE,
  CHANGES IN CURRENT OPERATIONS/LOCATION; WHATEVER THE
  DECISION, A RESPONSE IS SENT TO ASE VIA TAC".
    ENTERED+BY: "JJF-NELS".
    GAMMA:
        TVAR SSTEMP : EEOD+056+NEEDED+FEASIBLE+DATA
    * REGIN
      SSTEMP := D+056+NEEDED+FEASIBLE+DATA
      :D+139+TASK+QUE+ID+DATA := D+139+TASK+QUE+ID+DATA
      ;D+141+TIME+DATA := D+141+TIME+DATA
      ID+138+TASKING+RESPONSE+DATA := CAN+DO
      FOP EACH F+05+FEASIBLE+ACTIVITY+AREA+FILE RECORD DO BEGIN
        SELECT NEXT RECORD FROM
               F+96+FLIGHT+PROFILE+FILE
        IF RECORD+FOUND THEN BEGIN
          IF SQRT(SQR(D+041+FLIGHT+WAYPOINT+X+DATA =
                      D+143+X+LOC+FEASIBLE+DATA) +
                  SOR(D+042+FLIGHT+WAYPOINT+Y+DATA =
                      D+145+Y+LOC+FEASIBLE+DATA))
                 <= 3.2E4 THEN BEGIN
            D+041+FLIGHT+WAYPOINT+X+DATA :=
              D+143+X+LOC+FEASIBLE+DATA
```

```
10+042+FLIGHT+WAYPOINT+Y+DATA :=
             D+145+Y+LOC+FEASIALE+DATA
           D+043+FLIGHT+WAYPOINT+Z+DATA := 0.0
         END
         ELSE D+138+TASKING+RESPONSE+DATA := CANT+DO
       END
       ELSE (* NO RECORD FOUND *) BEGIN
         CREATE F+06+FLIGHT+PROFILE+FILE RECORD
         10+041+FLIGHT+WAYPDINT+X+DATA 1=
           D+143+X+LOC+FEASIBLE+DATA
         JD+042+FLIGHT+WAYPOINT+Y+DATA :=
           O+145+Y+LOC+FEASIBLE+DATA
         :D+043+FLIGHT+WAYPOINT+Z+DATA := 0.0
       END
     END ENDFOREACH
     ID+005+ASET+MSG+SQURCE+DATA I NELS
     ID+CO4+ASET+MSG+NAME+DATA IS MN+13+NELS+TASKING+RESPONSES
     10+002+ASET+MSG+DEST+DATA 1= ASE
  END:"
    FORMS:
         MESSAGE: M+13+NELS+TASKING+RESPONSES+MSG+OUT.
    INPUTS:
                D+056+NEEDED+FEASIBLE+DATA
         DATA:
                D+139+TASK+QUE+ID+DATA
         DATAS
         DATA:
                D+141+TIME+DATA
         FILE:
                 F+05+FEASIBLE+ACTIVITY+AREA+FILE
         FILE:
                Fe06+FLIGHT+PROFILE+FILE.
    CUTPUTS:
                 D+003+ASFT+MSG+ID+DATA
          DATA:
                 D+138+TASKING+PESPONSE+DATA
         DATAL
                 D+139+TASK+QUE+ID+DATA
         DATAL
                 D+141+TIME+DATA
         DATA:
                 F+06+FLIGHT+PRCFILE+FILE.
         FILE:
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     REFERRED BY:
          R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+R+NET.
ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA.
     PETA:
            "BEGIN
     SELECT FIRST RECORD FROM
           F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
     SELECT FIRST RECORD FROM
             F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE
     :CREATE F+25+NELS+TYPED+EMITTER+REPORT+FILE RECORD
       +D+176+NELS+EMITTER+BANDAIDTH+DATA :=
         DA150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
       10+177+NELS+EMITTE: +CEP+CATA := D+068+NELS+EMITTER+CEP+DATA
       10+070+NELS+EMITTER+COV+DATA := D+070+NELS+EMITTER+COV+DATA
       :D+074+NELS+FMITTER+FREQUENCY+DATA :=
         D+161+WELS+EMITTFR+TRANSMISSION+FREQUENCY+DATA
       :D+166+NELS+EMITTER+ID+DATA := D+160+NELS+EMITTER+ID+DATA
       +D+167+NELS+FMITTER+X+DATA 18
          D+162+NELS+EMITTER+X+CATA;
        D+168+NELS+FMITTER+Y+DATA 1=
          D+163+NELS+EMITTER+Y+DATA ;
        D+169+NELS+FMITTER+7+DATA :=
```

```
D+164+NELS+EMITTER+Z+DATA ;
    D+178+NELS+EMITTER+MODULATION+TYPE+DATA :=
      D+077+NELS+EMITTFR+MODULATION+TYPE+DATA
    :D+179+NELS+EMITTER+TIME+OF+LOCATION+DATA :=
      D+063+NELS+EMISSION+START+TIME+DATA
    10+180+NELS+EMITTER+TRAFFIC+TYPE+DATA : POTENTIAL+THREAT
    :D+170+SCENARIO+GEN+ID+NUM+DATA :=
      D+165+SCENARIO+GEN+ID+NUM+DATA
 END: ".
 DATE+ENTERED: 11282.
 DESCRIPTION:
          "A TRAFFIC TYPE CODE WILL BE GIVEN TO EACH
NARROWBAND EMISSION RASED ON ITS SIGNAL CHARACTERISTICS:
FREQUENCY, BANDWIDTH, MODULATION, AND EFFECTIVE RADIATED
POWERT.
  ENTERED+RY: "JJF-NELS".
  GAMMAS
     "VAR SSRAND : REAL
 JFUNCTION SSRANDU : REAL
   * REGIN
     SSRAND := 29.0 + SSRAND + 357.0
     ISSRAND I= SSRAND - TRUNC(SSRAND)
     :SSRANDU := SSRAND
   END
 IREGIN
   SSRAND := 0.65832
   ISELECT FIRST RECORD FROM
           F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
   ISELECT FIRST RECORD FROM
           F+18+NELS+ESTIMATEC+GROUND+TRUTH+FILE
   IWHILE FOUND DO BEGIN
     CREATE F+25+NELS+TYPED+EMITTER+REPORT+FILE RECORD
     10+176+NELS+EMITTFR+BANDHIDTH+DATA 1=
       D+159+NFLS+EMITTEP+FREQUENCY+BANDWIDTH+DATA
     10+177+NELS+EMITTER+CEP+DATA :=
       D+068+NELS+EMITTER+CEP+DATA
     : D+070+NELS+EMITTFR+COV+DATA :=
       D+070+NELS+EMITTER+COV+DATA
     JD+074+NELS+EMITTFR+FREGUENCY+DATA 1=
       0+161+NELS+FMITTER+TRANSMISSION+FREQUENCY+DATA
     :D+166+NELS+EMITTFH+ID+DATA :=
       D+160+NELS+EMITTER+TD+DATA
     ID+167+NELS+EMITTER+X+DATA :=
        D+162+NELS+EMITTER+X+DATA;
      D+168+NELS+EMITTER+Y+DATA :=
        D+163+VELS+EMITTER+Y+DATA :
      D+169+NELS+EMITTFR+2+DATA :=
        De164+NELS+EMITTER+Z+DATA :
      D+178+NELS+EMITTER+MODULATION+TYPE+DATA :=
       0+077+NELS+EMITTEP+MUDULATION+TYPE+DATA
     ID+179+NELS+EMITTER+TIME+OF+LOCATION+DATA IX
       D+063+NELS+EMISSION+START+TIME+DATA
     10+170+SCENARIO+GEN+ID+NUM+DATA 12
       D+165+SCENAPIO+GEN+ID+NUM+DATA
     ISSRAND I SSRANDII
     ITF SSRAND <= 1.0 /3.0 THEN
       D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA := PASSIVE
     ELSE IF SSRAND >= 2.0 / 3.0 THEN
```

```
D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA :=
            POTENTIAL+THREAT
        ELSE D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA IN THREAT
        ISELECT NEXT RECORD FROM
                F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
        SELECT NEXT RECORD FROM
                F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
        END (* WHILE *)
     END: ".
     INPUTS:
          FILE:
                F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
          FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
     nutputs:
          FILE: F+25+NELS+TYPED+EMITTER+REPORT+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNATURE+ANALYSIS.
     REFERRED BY:
          SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB.
ALPHA:
       A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA.
     PETAL
     "VAR DREAL : REAL
  IPEGIN
    CREATE F+33+SENSOR+PLATFUPM+LOCATION+FILE RECORD
      ID+114+PLATFORM+LOCATION+X+DATA IS D+014+ASP+LOC+X+DATA
      ID+115+PLATFORM+LOCATION+Y+DATA := D+015+ASP+LOC+Y+DATA
      ID+116+PLATFORM+LOCATION+Z+DATA IN D+016+ASP+LUC+Z+DATA
      IP+005+ASET+MSG+SOUPCE+PATA := NELS
      ID+004+ASET+MSG+NAME+DATA :=
        MN+07+NELS+PLATFUPM+LOCATION+REPORTS
      ID+002+ASET+MSG+DEST+DATA := ASE
  END, ".
     DATE+ENTERED: 11862.
     DESCRIPTION: "TO INFORM THE ASE ELEMENT OF SENSOR LOCATION".
     ENTERED+BY: "JJF-NELS".
     GAMMA :
      MREGIN
  D+005+ASET+MSG+SOURCE+DATA := NELS
  JD+004+ASET+MSG+NAME+DATA I= "N+07+NELS+PLATFORM+LOCATION+REPORTS
  10+002+ASET+MSG+DEST+DATA := ASE
  ICREATE F+33+SENSOR+PLATFORM+LOCATION+FILE RECORD
  10+114+PLATFORM+LOCATION+X+DATA := D+014+ASP+LOC+X+DATA
  ID+115+PLATFORM+LOCATION+Y+DATA := D+015+ASP+LOC+Y+DATA
  10+116+PLATFORM+LOCATION+Z+PATA := P+016+ASP+LOC+Z+DATA
ENDI".
     FORMS:
          MESSAGE: M+07+MELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     INPUTS:
          DATA: D+020+45P+STATE+VECTOR+DATA.
     OUTPUTS:
          DATAS
                D+003+ASFT+MSG+ID+DATA
                F+33+SENSOR+PLATFORM+LOCATION+FILE.
          FILE:
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     REFERRED 8Y:
          SUBNET:
                  S+2+DU+NELS+OPFRATIONAL+CONTROL+SUR.
ALPHA: A+14+NELS+PPOCESS+COMMANDERS+REQUIREMENTS+ALPHA.
```

```
"VAR DREAL : REAL
 IREGIN
    IF (D+040+FIRST+CMDRS+REQ+UPDATE+DATA = IN+AREA) OR
       (D+040+FIRST+CMDRS+REG+UPDATE+DATA = OUTSIDE+AREA) OR
       (D+133+SECOND+CMDRS+REG+UPDATE+DATA = IS+MODULATED) OR
       (D+133+SECOND+CMDRS+REQ+UPDATE+DATA = IS+NOT+MODULATED)
       THEN DREAL := 0.0
    FOR EACH F+20+NELS+PRE+BRIEFED+A01+FILE RECORD DO
      D+097+NELS+PRE+BRIEFED+AOI+LOWER+LEFT+X+DATA :=
       D+097+NELS+PRE+BRIEFED+AOI+LOWER+LEFT+X+DATA ENDFOREACH
    JFOR EACH F+21+MELS+PRE+BRIFFED+SOI+FILE RECORD DO
     D+103+NELS+PRE+BRIEFED+SOI+END+FREQ+DATA 12
       D+103+NELS+PRE+BRIEFED+SOI+END+FREQ+DATA ENDFORFACH
 END:"
    DATE+ENTERED: 11482.
    DESCRIPTION:
             "UPDATES PLANNING INFORMATION TO DIRECT NELS
  OPERATIONS (PLATFORM MISSIPM OBJECTIVES, INITIAL SOI/ADI
  REQUIREMENTS, AND PROCESSING PRIORITIES)
    ENTERED+BY: "JJF=NELS".
    GAMMA &
      *VAR SSTEMP040 : FEOD+040+FIRST+CMDRS+REQ+UPDATE+DATA
           ISSTEMP133 : EFOD+133+SECOND+CMDRS+REQ+UPDATE+DATA
  IREGIN
    FOR EACH F+04+CMDRS+DATA+TO+UPDATE+FILE RECORD DO BEGIN
      SSTEMP040 := D+040+FIRST+CMDRS+REQ+UPDATE+DATA
      #SSTEMP133 #= D+133+SECOND+CMDRS+RER+UPDATE+DATA
   END ENDFOREACH
    FOR EACH F+20+NELS+PRE+BRIEFFD+ADI+FILE RECORD DO
      D+094+NELS+PRE+RRIEFED+AOT+DATA :=
        D+094+NELS+PRE+BRIEFED+AOI+DATA ENDFOREACH
    #FOR EACH F+21+NELS+PRE+BPIFFED+SOI+FILE RECORD DO
      D+102+NELS+PRE+BRIEFED+SOI+DATA :=
       D+102+NELS+PRE+BRIEFED+SGI+DATA ENDFOREACH
 END . " .
    INPUTS:
          FILE:
                 F+04+CMDRS+CATA+TO+UPCATE+FILE
          FILE:
                 F+20+NELS+PRE+BRIEFED+A01+FILE
          FILF:
                 F+21+NFLS+PRE+PRIEFED+SDI+FILE.
    OUTPUIS:
          FILE:
                 F+20+NFLS+PRE+PRIEFED+A0I+FILE
          FILE: F+21+NELS+PRE+PRIEFED+SOI+FILE.
     TRACED FROM:
          ORIGINATING+REUDIREMENT: ORIG+REQ+NELS+EXTFRNAL+INTERFACE.
     REFERRED BY:
          RENET: R+2+MODFL+NFLS+SENSOR+SYSTEM+R+NET.
ALPHA: A+15+NELS+PROCESS+PPIORITIZED+SENSOR+DIPECTIONS+ALPHA.
     BETA:
           "VAR I :INTEGER
         DREAL : REAL
  * REGIN
    IF ((D+056+NEEDED+FEASIBLE+DATA = SOI) OR
        (D+056+NEFDED+FEASIPLE+DATA # AOI) OR
        (D+056+NEEDED+FFASIBLE+DATA = BOTH)) AND
```

((D+135+SENSOR+ID+DATA = NELS+GPS+1) OR (D+135+SENSOR+ID+DATA = NELS+GPS+3) OR

```
(D+135+SENSOR+ID+DATA = NFLS+GPS+3))
        THEN DREAL := 0.0
    IT IN DAISTASENSORAPRIORITYADATA
    ISELECT FIRST RECORD FROM
            F+05+FEASIBLE+ACTIVITY+AREA+FILE
    IDREAL := D+143+X+LOC+FEASIPLE+DATA
    FOR EACH F+19+NELS+FREQUENCY+SCAN+FILE RECORD DO BEGIN
     D+092+NELS+FRFQ+SCAM+LOWER+FREQ+DATA 1=
        D+092+NELS+FREQ+SCAN+LOWER+FREQ+DATA;
      D+093+NELS+FREG+SCAN+UPPER+FREG+DATA 1=
       D+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA END ENDFOREACH
 END: ".
    DATE+ENTERED: 11482.
    DESCRIPTION: "UPDATES SENSOR PRIORITIES".
    FNTEPED+BY: "JJF-NELS".
     GAMMAS
      TVAR SSTEMPI : INTEGER
           SSTEMPR : REAL
           :SSTEMP056 : EFOD+056+NEEDED+FEASIBLE+DATA
           :SSTEMP135 : EFOD+135+SENSOR+ID+DATA
  PEGIN
    SSTEMP056 1= D+056+NEFDED+FEASIBLE+DATA
    ;SSTEMP135 := D+135+SENSOR+ID+DATA
    ISSTEMPI := D+137+SENSOR+PRIORITY+DATA
    FOR EACH F+05+FEASIBLE+ACTIVITY+AREA+FILE RECORD DO BEGIN
      SSTEMPR := D+143+x+LUC+FEASIBLE+DATA
      ISSTEMPR := D+145+Y+LOC+FEASIBLE+DATA
     END ENDFOREACH
    FOR EACH F+19+NELS+FREQUENCY+SCAN+FILE RECORD DO BEGIN
      D+092+NELS+FREG+SCAN+LOWER+FREG+DATA :=
        D+092+NELS+FREQ+SCAN+LOWER+FREG+DATA
      3D+C93+NELS+FRER+SCAN+UPPER+FRER+DATA 1=
        D+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA
    END ENDFOREACH
  END; ".
     INPUTS:
                D+056+NEEDED+FEASIBLE+DATA
          DATAS
          DATA:
                 0+135+SENSOR+ID+DATA
          DATA:
                 D+137+SENSOR+PRIORITY+DATA
                 F+05+FEASIBLE+ACTIVITY+AREA+FILE
          FILE:
          FILE:
                F+19+NELS+FREQUENCY+SCAN+FILE.
     OUTPUTS:
          FILE: F+19+NELS+FRFQUENCY+SCAN+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
     REFERRED BY:
          R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+R+NET.
ALPHA: A+16+NELS+PROCESS+REQUESTED+DATA+ALPHA.
     RETAI
     "VAR DREAL : REAL
  18EGIN
    IF D+045+GPS+ID+DATA IN [GPS+1+NELS,GPS+2+NELS,GPS+3+NELS]
    THEN DREAL IN 0.0
    FOR EACH F+07+GROUP+TAPGET+LOCS+FILE RECORD DO
      DREAL := D+048+GROUND+TARGET+LOC+X+DATA ENDFOREACH
    FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
      D+041+FLIGHT+WAYPOINT+X+DATA :=
```

```
D+041+FLIGHT+WAYPOINT+X+DATA ENDFOREACH
END:".
   DATE+ENTERED: 11482.
   DESCRIPTION:
           *UPDATES FLIGHT PROFILE FILE WHEN TARGET LOCATIONS
 ARE SENT FROM ASE (INFORMATION REQUESTED BY SENSOR)".
   ENTEREDORY: "JJF-NELS".
   GAMMAI
      "LABEL 1
       : VAR SSTEMP045 : EEOD+045+GPS+ID+DATA
            :SSCLOSE : BOOLEAN (* ARE THE TWO POINTS CLOSE? *)
  ; REGIN
    SSTEMP045 := P+045+GPS+ID+DATA
    SELECT FIRST RECORD FROM
            F+07+GROUP+TARGET+LOCS+FILE
    :SSCLOSE := FALSE
    INHILE FOUND DO BEGIN
      (* CHECK IF POINT IN FO7 IS CLOSE TO ANYTHING IN FO6 *)
      ; SELECT FIRST RECORD FROM
              F+06+FLIGHT+PROFILE+FILE
      WHILE FOUND DO BEGIN
        IF SURT(SOR(D+041+FLIGHT+WAYPOINT+X+DATA -
                    D+048+GROUND+TARGET+LOC+X+DATA) +
                SOR (D+042+FLIGHT+WAYPOINT+Y+DATA -
                    D+049+GPOUND+TARGET+LOC+Y+DATA1)
           <= 1.6F4 (* 10 MILES *) THEN SSCLOSE := TRUE
        : IF SSCLOSE THEN GOTO 1
        ELSE SELECT NEXT RECORD FROM
                    F+06+FLIGHT+PROFILE+FILE
      END (* WHILE *)
      :1: IF SSCLOSE THEN BEGIN
        SELECT NEXT RECORD FROM
               F+07+GROHP+TARGET+LOCS+FILE
      END
      ELSE BEGIN
        CREATE F+06+FLIGHT+PRCFILE+FILE RECORD
        1D+041+FLIGHT+WAYPGINT+X+DATA 1E
          D+048+GPOUND+TAPGET+LOC+X+DATA
        1D+042+FLIGHT+WAYPOINT+Y+DATA 1=
          D+049+GROUND+TARGET+LOC+Y+DATA
        #D+043+FLIGHT+HAYPOINT+Z+DATA #= 0.0
        ISELECT NEXT RECORD FROM
                F+07+GROUP+TARGET+LOCS+FILE
      END
    END (* WHILE *)
  END ".
   INPUTS:
        DATAS
               D+045+GPS+ID+DATA
               F+06+FLIGHT+PROFILE+FILE
        FILE:
              F+07+GROUP+TARGET+LOCS+FILE.
        FILE:
   OUTPUTS:
        FILE: F+06+FLIGHT+PRCFILE+FILE.
   TRACED FROM:
        URIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
   REFERRED BY:
        R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+R+NET.
```

ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA.

```
"VAR DREAL : REAL
 DREAL IR D+014+ASP+LOC+X+DATA
  ID+091+NELS+FREGUENCY+SCAM+DATA IS
    D+091+NELS+FREQUENCY+SCAN+DATA
  FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
    DREAL I= D+041+FLIGHT+WAYPOINT+X+DATA ENDFOREACH
  IFOR EACH F+20+NELS+PRE+BRIEFED+A0I+FILE RECORD DO
    DREAL 1= D+097+NELS+PRE+BRIEFED+ADI+LOWER+LEFT+X+DATA
 ENDFOREACH
  FOR EACH F+21+NELS+PRE+BRIEFED+SOI+FILE RECORD DO
    DREAL 1=0+103+NELS+PRE+BRIEFED+SOI+FND+FRFQ+DATA
 ENDFOREACH
  CREATE F+34+SENSOR+STATUS+FILE RECORD
   10+044+FREQUENCY+SCAN+PARAMETER+DATA := 0.0
    ID+136+SENSOR+MODE+OF+OPERATION+DATA := SOI+SEARCH
    ;D+135+SENSUR+ID+DATA := NELS+GPS+1
    ID+005+ASET+MSG+SOURCE+DATA := NELS
    10+004+ASET+MSG+NAME+DATA := MN+11+NELS+SENSUR+SYSTEM+STATUS
    10+002+ASET+MSG+DEST+DATA 1= ASE
END;"
  DATE+ENTERED: 11882.
  DESCRIPTION:
           "DETERMINES IF THERE IS ANYTHING FOR THE NELS
PLATFORMS TO DOW.
  ENTERED+BY: "JJF-NFLS".
  GAMMAI
     TVAR SSTEMPR : REAL
 1 BEGIN
   SSTEMPR := D+014+ASP+LDC+X+DATA
   SELFCT FIRST RECORD FROM
           F+06+FLIGHT+PROFILF+FILE
   :SSTEMPR := D+041+FLIGHT+WAYPOINT+X+DATA
   SFLECT FIRST RECORD FROM
           F+20+NELS+PRF+RRIEFED+AQI+FILE
   ; IF FOUND THEN SSTEMPR :=
    D+097+NELS+PRE+BRIEFED+ACI+LOWER+LEFT+X+DATA
   SFLECT FIRST PECORD FROM
           F+21+NELS+PRF+PRIEFED+SOI+FILE
   :IF FOUND THEN SSTEMPR :=
     D+103+NELS+PRE+BRIFFED+SCI+END+FREQ+DATA
   CREATE F+34+SENSOR+STATUS+FILE RECORD
   10+044+FREQUENCY+SCAN+PARAMETER+DATA 12
     D+091+NELS+FREQUENCY+SCAN+DATA
   10+135+SENSOR+ID+DATA 12 NELS+GPS+1
   10+005+ASET+MSR+SOURCE+DATA := NELS
   ID+004+ASET+MSG+NAME+DATA := MN+11+NFLS+SENSOR+SYSTEM+STATUS
   10+002+ASET+MSG+DEST+DATA 1= ASE
   :D+091+NELS+FREQUENCY+SCAM+DATA :=
     D+091+NELS+FREQUENCY+SCAN+DATA
   IIF EOF(STAT) THEN D+136+SENSOR+MODE+OF+OPFRATION+DATA := IDLE
  FLSE READLN(MSGS,D+136+SFNSOR+MODE+OF+OPERATION+DATA)
ENDI".
  FORMS:
       MESSAGE
                 M+11+NELS+SENSUR+SYSTEM+STATUS+MSG+PUT.
   INPUTS:
```

DATA: D+003+ASFT+MSG+ID+DATA

```
DATA:
                 D+020+ASP+STATE+VECTOR+DATA
          DATAS
                 D+091+NELS+FREQUENCY+SCAN+DATA
          DATAL
                 D+135+SENSOR+ID+DATA
          FILE:
                 F+06+FLIGHT+PROFILE+FILE
                 F+20+NELS+PRE+PRIEFED+AUI+FILE
         FILE:
                 F+21+NELS+PRE+RRIEFED+SOI+FILE.
         FILE:
    OUTPUTS:
         DATAL
                 D+003+ASFT+MSG+ID+DATA
         DATAL
                 D+091+NELS+FREQUENCY+SCAN+DATA
          DATAL
                 D+135+SENSOR+ID+DATA
          FILE:
                 F+34+SENSOR+STATUS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
    REFERRED BY:
          SUBNET: S+1+CHECK+NELS+SENSOP+STATUS+SUB.
ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA.
    RETA:
            MVAR DREAL : REAL
   18EGIN
    DRFAL := D+018+ASP+PITCH+DATA
     DREAL IS D+010+ASP+ALTITUDE+DATA
     :DREAL := D+014+ASP+1 OC+X+PATA
     POPEAL IS DEOGIENELSEFREDUENCY SCANEDATA
     IFOR EACH F+21+NFLS+PRE+BRIEFED+SUI+FILE RECORD DU
       DREAL I= D+103+NELS+PRE+PREEFED+SUT+FNO+FREQ+DATA
    ENDFORFACH
     *CREATE F+10+NELS+CANDIDATE+TARGETS+FILE RECORD
     :SELECT FIRST RECUPD FROM
             F+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
     ISELECT FIRST RECURD FROM
             F+15+NFLS+FMITTEP+CHARACTERISTICS+FILE
       1D+061+NELS+EMISSION+DURATION+DATA :=
         D+064+NELS+EMISSION+STCP+TIME+DATA +
         D+063+B+NELS+EMISSION+START+TIME+DATA
       +D+062+NELS+FMISSINN+SIGNAL+STRENGTH+DATA :=
         D+078+A+NELS+EMITTFR+POWER+LEVEL+DATA
       :0+063+NELS+FMISSINN+START+TINE+DATA :=
        D+063+R+NELS+EMISSION+START+TIME+DATA
       :0+073+NELS+FMITTER+FREQUENCY+BANDWIDTH+DATA :=
        D+073+B+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
       JD+075+NELS+FMITTER+ID+DATA := D+075+B+NELS+EMITTER+ID+DATA
       10+085+NELS+EMITTER+X+DATA :=
          D+ORS+B+NELS+EMITTER+Y+DATA:
        D+086+NELS+FMITTER+Y+DATA :=
          D+OR6+B+NELS+EMITTER+Y+DATA :
        D+087+NELS+FMITTER+7+DATA :=
          D+087+B+NFLS+EMITTER+Z+DATA ;
       D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
         D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
       *D+130+SCENAPIO+GEN+TD+NUM+DATA :=
         D+130+8+SCENARIO+GEN+ID+NUM+DATA
  ENDI".
    PATE+ENTERFUL 11182.
     DESCRIPTION:
             THE NELS GPS WILL DIRECT THE MELS ATRROPHE RENSORS
   TO TUNE TO A SPECIFIC FREGUENCY RAND: THE NARROWBAND EMITTER
   GROUND TRUTH DATA BASE IS SEARCHED FOR ALL EMITTERS TRANSMITTING
```

```
ON A FREQUENCY WITHIN THE BAND TO WHICH THE SENSOR RECEIVERS
HAVE BEEN TUNED".
  ENTERED+BY: "JJF-NELS".
  GAMMAS
     TVAR SSTEMPR : REAL
          188FILTER : ROOLEAN
 *REGIN
   SSTEMPR 1= D+018+ASP+PITCH+DATA
   ISSTEMPR IN D+010+ASP+ALTITUDE+DATA
   FOR EACH F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE RECORD
   DO BEGIN
     IF (D+063+B+NELS+EMISSION+START+TIME+DATA <=
         D+021+ASP+TIME+DATA) AND
        (D+064+NELS+EMISSION+STOP+TIME+DATA >=
         D+021+ASP+TIMF+DATA) THEN BEGIN
       (* MEETS TIME, CLOCK SCI. *)
       SELECT FIRST RECORD FROM
              F+21+NEL9+PRE+BRIEFED+SOI+END+FREQ+DATA
       ISSFILTER IM FALSE
       #WHILE FOUND AND NOT SSFILTER DO BEGIN
         IF NOT(((D+103+NELS+PRE+BRIEFED+S01+EMD+FREQ+DATA>=
               D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA)
              (D+106+NFLS+PRE+BRIEFED+S0I+START+FREQ+DATA<=
               D+OB1+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA))
              (D+104+NELS+PRE+BRIEFED+SOI+FREQ+DATA =
               D+081+8+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA)
             uR
              (D+091+NFLS+FREQUENCY+SCAN+DATA =
               0+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA))
             THEN SSFILTER := TRUE
         SELECT NEXT RECORD FROM
                 F+21+NELS+PRE+BRIEFED+SOI+FILE
       END (* WHILE *)
       IF NOT SSFILTER THEN BEGIN
         (* ADD TO CANDIDATE TARGET LIST *)
         CREATE F+10+NELS+CANDIDATE+TARGETS+FILE RECORD
         :D+061+NELS+EMISSION+DURATION+DATA :=
           D+064+NFLS+FMISSION+STOP+TIME+DATA -
           D+063+B+NELS+EMISSION+START+TIME+DATA
         ID+063+NELS+EMISSION+START+TIME+DATA 12
           D+063+B+NELS+EMISSION+START+TIME+DATA
         10+075+NELS+EMITTER+ID+DATA 1=
           D+075+B+NELS+EMITTER+ID+DATA
         1D+085+NELS+EMITTER+X+DATA :=
           D+085+8+NELS+EMITTER+X+DATA
         10+086+NELS+EMITTER+Y+DATA 1#
           D+086+B+NELS+EMITTER+Y+DATA
         ID+087+NELS+EMITTER+Z+DATA :=
           D+087+8+NELS+EMITTER+I+DATA
         ;D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
           D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
         ID+130+SCENARIO+GEN+ID+NUM+DATA IM
           D+130+B+SCENARIO+GEN+ID+NUM+DATA
         SELECT FIRST RECORD FROM
                 F+15+NELS+EMITTER+CHARACTERISTICS+FILE
         ; WHILE D+075+NELS+EMITTFR+ID+DATA <>
```

```
D+075+NELS+EMITTER+ID+DATA DO REGIN
            SELECT NEXT RECORD FROM
                   F+15+NFLS+EMITTER+CHARACTERISTICS+FILE
         END (* WHILE *)
          10+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA 1=
            D+078+A+NELS+EMITTER+POWER+LEVEL+DATA
          :D+073+MELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
            D+067+NELS+FMITTER+BANDWIDTH+DATA
       END
     END
   END ENDFOREACH
 END, ".
  INPUTS:
       DATAL
              D+011+ASP+ATTITUDE+DATA
       DATAL
               D+013+ASP+LOCATION+DATA
       DATA:
               D+020+ASP+STATE+VECTOR+DATA
       DATAL
              D+091+NELS+FREQUENCY+SCAN+DATA
       FILE:
              F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
        (* USED BUT NOT UPDATED *)
       FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE
        (* USED BUT NOT UPDATED *)
       FILE: F+21+NELS+PRE+PRIEFED+SOI+FILE.
  OUTPUTS:
       FILE
              F+10+NELS+CANDIDATE+TARGETS+FILE.
  TRACED FROM:
        ORIGINATING+REGIDIPEMENT: ORIG+REG+NELS+EMITTER+DEFAULT
       ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+SIGNAL+OF+INTEREST:
  REFERRED BY:
                S+5+MODEL+NELS+SENSOR+SUB.
        SUBNET:
     A+19+NELS+SIGNAL+TO+NDISE+DETECTABILITY+ALPHA.
  BETA:
         "VAR DREAL : REAL
1BEGIN
 DREAL ## D+018+ASP+PITCH+DATA
 JOREAL := D+010+ASP+ALTITUDE+DATA
 ; DREAL := D+014+ASP+LDC+X+DATA
  FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
    D+061+NELS+EMISSION+DURATION+DATA :=
      D+061+NELS+FMISSION+DURATION+DATA
    ; D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
      D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
    ;D+063+NELS+EMISSIUN+START+TIME+DATA :=
      D+063+NELS+FMISSION+START+TIME+DATA
    :D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
      D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
    ;D+C75+NELS+EMITTER+ID+DATA := D+O75+NELS+EMITTER+ID+DATA
    ID+085+NELS+EMITTER+X+DATA :=
       D+085+NELS+EMITTER+X+DATA;
    D+086+NELS+EMITTER+Y+DATA :=
       D+086+NELS+EMITTER+Y+DATA ;
     D+087+NELS+EMITTER+Z+DATA :=
      D+087+NELS+EMITTER+Z+DATA ;
   D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
      D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
    IP+130+SCENARTO+GEN+ID+NUM+DATA IR
     D+130+SCENARIO+GEN+ID+NUM+DATA
 END ENDFOREACH
```

```
FOR EACH F+26+NELS+WEATHER+CONDITE NS+FILE RECORD DO
    DREAL := D+144+X+WEATHER+LOC+DATA
                                         ENDFOREACH
END:
   DATE+ENTERED: 11182.
   DESCRIPTION:
           "THE S/N AT EACH AIRBORNE SENSOR RECEIVER IS COMPUTED
 FOR EACH EMITTER WITHIN THE CANDIDATE TARGET LIST: IF THE S/N
 DOES NOT EXCEED A PRESET THRESHOLD FOR AT LEAST TWO OF THE NELS
 SENSOR RECEIVERS, THE EMITTER IS REMOVED FROM THE CANDIDATE
 TARGET LIST".
   ENTERED+RY: "JJF-NELS".
   GAMMAT
    "VAR SSTEMPR : REAL
         ISSTRANSMISSION & REAL
         ISSTHRESHOLD : REAL
*BEGIN
  SSTEMPR := D+018+ASP+PITCH+DATA
  ISSTEMPR := D+010+ASP+ALTITUDE+DATA
  :SSTHRESHOLD := 1.2
  IFOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
    SELECT FIRST RECORD FROM
           F+26+NELS+WEATHEP+CONDITIONS+FILE
    :WHILE SQRT(SOR(D+085+NELS+EMITTER+X+DATA -
                    D+144+X+WEATHER+LOC+DATA) +
                SOR (D+086+NELS+EMITTER+Y+DATA -
                    D+146+Y+WEATHER+LOC+DATA)) > SQRT(2.0)
    DO REGIN
      SELECT NEXT RECORD FROM
             F+26+NELS+WEATHER+CONDITIONS+FILE
    END (* WHILE *)
    :CASE D+120+PRECIPITATION+DATA OF
      NONE : SSTRANSMISSION : # 1.5
      :DRIZZLE : SSTRANSMISSION := 1.4
      ; RAIN : SSTRANSMISSION := 1.3
      ; SNOW : SSTRANSMISSTON := 1.3
      SLEET : SSTRANSMISSION := 1.2
      ; HAIL : SSTRANSMISSION := 1.1
      :RIME : SSTPANSMISSION := 1.4
    END (* CASE *)
    ; IF SSTRANSMISSION < SSTHRESHOLD THEN BEGIN
      DESTROY F+10+NELS+CANDICATE+TARGETS+FILE RECORD
    ENC
  END ENDFOREACH
END; ".
   INPUTS:
               D+011+ASP+ATTITUDE+DATA
        DATA:
        DATA:
               D+013+ASP+LOCATION+DATA
        DATAS
               D+020+ASP+STATE+VECTOR+DATA
        FILF: F+10+NELS+CANDIDATE+TARGETS+FILE
        FILE: F+26+NFLS+WEATHER+CONDITIONS+FILE
        (* USED BUT NOT UPDATED *).
   OUTPUTS:
        FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
   TRACED FRUME
        OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNAL+TO+NDISE.
   REFERRED BY:
        SUBNET: S+5+MODEL+MELS+SENSOR+SUB.
```

```
ALPHA:
       A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     BETAL
       "BFGIN
    D+005+ASET+MSG+SOURCE+DATA := NELS
    ID+004+ASET+MSG+NAME+DATA := MN+14+NELS+TRACK+MESSAGE
    JD+002+ASET+MSG+DEST+DATA := ASE
    ID+029+CARTO+SECTION+NUM+DATA 1= 1
    :0+047+GROUND+TARGET+LENGTH+DATA := 0.0
    10+050+GROUND+TARGET+VELOCITY+DATA := 0.0
    10+142+TRACK+MESSAGE+DATA := TRACKING
    FOR EACH F+25+MELS+TYPED+EMITTER+REPORT+FILE RECORD DO BEGIN
      D+045+GPS+ID+DATA IZ GPS+1+NELS
      ID+046+GROUND+FARGET+FREQUENCY+DATA IR
        D+074+NELS+FMITTER+FREQUENCY+DATA
      10+135+SENSOR+ID+DATA := NELS+GPS+1
      ICREATE F+07+GROUP+TARGET+LOGS+FILE RECORD
      ID+048+GROUND+TARGET+LUC+X+DATA IR D+167+NELS+EMITTER+X+DATA
      ID+049+GROUND+TARGET+LOC+Y+DATA IT D+1-8+NELS+EMITTER+Y+DATA
   END ENDFOREACH
 END;"
     DATE+ENTERED: 11882.
     DESCRIPTION:
             "TO INFURM ASE OF TARGETS CURRENTLY UNDER SURVEILLANCE,
   THOSE ABOUT TO BE LOST, AND THOSE NOT CURRENTLY UNDER
   SURVEILLANCE WHICH COULD OR SHOULD BET.
     ENTEPED+BY: "JJF-NELS".
     GAMMA:
         *PROCEDURE SSZOMAKE
            : REGIN
              CASE De080+NELS+EMITTER+TRAFFIC+TYPF+DATA OF
                PASSIVE : BEGIN
                  D+005+ASET+MSG+SOURCE+DATA := NFLS
                  2D+004+ASFT+HSG+NAME+DATA :=
                  :MN+05+NELS+NCN+SURVEILLANCE+TARGFT+REPORTS
                  ;P+002+ASET+MSG+DEST+DATA 1= ASE
                  ID+045+GPS+ID+DATA := GPS+1+NELS
                  ID+046+GROUND+TARGET+FREQUENCY+DATA I=
                    D+074+NFLS+FHITTEP+FREQUENCY+DATA
                  : P+047+GROUND+TARGET+LENGTH+DATA := 0.0
                  :P+050+GROUND+TARGET+VELOCITY+D4TA := 0.0
                  :CREATE F+07+GROUP+TARGET+LOCS+FILE RECORD
                  JP+048+GROUND+TARGET+LUC+X+DATA 1=
                    D+167+NELS+EMITTER+X+DATA
                  ID+049+GROUNU+TARGET+LOC+Y+DATA :=
                    D+168+NFLS+EMITTER+Y+DATA
                  *FERFORM
                  (M+05+NELS+MON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT)
                END
                POTENTIAL +THREAT : SEGIN
                  D+005+ASET+MSG+SOURCE+DATA IS NELS
                  IT+004+ASET+MSG+NAME+DATA 12
                    MN+12+NFLS+SURVFILLANCE+TARGET+REPORTS
                  ; De002+ASET+MSG+DEST+DATA := ASE
                  :D+045+GPS+IO+DATA IE GPS+1+NFLS
                  ID+046+GROUND+TARGET+FREQUENCY+DATA 1=
                    D4074+NELS+EMITTER+FREULIENCY+DATA
                  10+047+GROUND+TARGET+LENGTH+DATA := 0.0
                  ID+050+GROUND+TARGET+VELUCITY+CATA := 0.0
```

```
ICREATE F+07+GROUP+TARGET+LOCS+FILE RECORD
             ID+048+GROUND+TARGET+LOC+X+DATA 18
               D+167+NFLS+EMITTER+X+DATA
             ;D+049+GROUND+TARGET+LOC+Y+DATA :=
               D+168+NELS+EMITTER+Y+DATA
             :EE8FORM
             (M+12+NELS+SURVEILLANCE+TARGET+REPORT+MSG+OUT)
           END
           ITHREAT : BEGIN
             D+005+ASET+MSG+SOURCE+DATA := NELS
             ;D+004+ASET+MSG+NAME+DATA 1#
              MN+14+NELS+TRACK+MESSAGE
             :D+002+ASET+MSG+DEST+DATA := ASE
             ; D+029+CARTO+SECTION+NUM+DATA := 1
             :D+135+SENSOR+ID+DATA := NELS+GPS+1
             ;D+142+TRACK+MESSAGE+DATA := CAN+TRACK
             JEESFORM (M+14+NELS+TRACK+MESSAGE+MSG+OUT)
           END
        END (* CASE *)
      END (* SSZOMAKE *)
.BEGIN
 SELECT FIRST RECORD FROM
         F+25+NELS+TYPFD+EMITTER+REPORT+FILE
  IF FOUND THEN BEGIN
    SS20MAKE
    SELECT NEXT RECORD FROM
            F+25+NFLS+TYPED+EMITTER+REPORT+FILE
    ; WHILE FOUND DO REGIN
      SSZOMAKE
      SELECT NEXT RECORD FROM
              F+25+NFLS+TYPED+FMITTER+REPORT+FTLE
    END (* WHILE *)
 END
END
PROCEDURE SSZODUMMY
  *BEGIN (* DUMMY HEADER FOR PROCEDURE THAT IS NEVER CALLED. *)
  (* INTENDED TO DECEIVE REVS SO THAT THE THREE FERFORM CALLS*)
  (* WILL NEVER BE EXECUTED. IN GENERAL, ALL THREE MESSAGES *)
  (* MAY NOT BE FORMED EVERY TIME THE ALPHA IS EXECUTED. *)
 FND:".
FORMS:
     MESSAGE: M+05+NELS+NON+S!IRVETLLANCE+TARGET+REPORTS+MSG+OUT
     MESSAGE: M+12+MELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT
     MESSAGE: M+14+NELS+TRACK+MFSSAGE+MSG+OUT.
INPUTS:
     FILE: F+25+NELS+TYPED+EMITTER+REPORT+FILE.
OUTPUTS:
            D+003+ASET+MSG+ID+DATA
     DATA:
     DATA:
            P+045+GPS+ID+DATA
            D+046+GROUND+T4RGET+FREQUENCY+DATA
     DATA:
            D+047+GROUND+TARGET+LENGTH+DATA
     DATAL
     DATA:
            D+050+GROUND+TARGET+VELOCITY+DATA
     DATAL
            U+135+SENSOR+IC+DATA
     DATAS
            D+142+TRACK+MESSAGE+DATA
            F+02+CARTO+UPDATE+FILE
    FILE:
    FILE:
            F+07+GROUP+TARGET+LOCS+FILE.
TRACED FRUM:
     ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
```

#BFGIN

SSTEMPR := D+018+ASP+PTTCH+DATA

REFERRED BY:

```
SUBNET:
                   S+2+DO+NELS+OPERATIONAL+CONTROL+SUB.
ALPHA:
       A+21+NELS+TARGET+ACQUISITION+ALPHA.
     BETA:
            MVAR DREAL : REAL;
   BEGIN
     DREAL := D+018+ASP+PITCH+DATA
     DREAL IN D+010+ASP+ALTITUDE+DATA
     IDREAL IS DEGLASPELOCEXEDATA
     FOR EACH F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
       CREATE F+17+NELS+ESTIMATED+EMITTER+PAHAMETERS+FILE RECORD
       ;D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA ;=
           D+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
         #D+077+NELS+EMITTER+MODULATION+TYPE+DATA ## MODULATED
         D+078+NELS+EMITTER+POWEP+LEVEL+DATA ## 0.0
         10+161+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA 1=
           D+152+NELS+EMITTFR+TRANSMISSION+FREQUENCY+DATA
       *CREATE F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD
         ;D+157+NELS+EMISSION+DURATION+DATA 12
           D+147+NELS+EMISSION+DURATION+DATA
         JD+160+NFLS+EMITTER+ID+DATA := D+151+NELS+EMITTER+ID+DATA
       ;D+162+NELS+FMITTER+X+FATA :=
          D+153+NELS+EMTTTER+X+DATA;
        D+163+NELS+FMITTER+Y+DATA :=
          D+154+NELS+EMITTER+Y+DATA :
        D+164+NELS+FMITTER+Z+DATA :#
          D+155+NELS+EMITTEP+7+PATA
        1D+162+NELS+EMITTER+X+DATA :=
          D+153+NELS+FMITTER+X+DATA
        1D+163+NELS+EMITTER+Y+DATA 1=
          D+154+NELS+EMITTER+Y+CATA
        ID+164+NELS+EMITTER+Z+DATA 1=
          U+155+NELS+EMITTER+Z+CATA
        :D+165+SCENARIO+GEN+ID+NUM+DATA :=
          D+156+SCENARIO+GEN+ID+NUM+DATA
       CREATE F+24+NELS+TDDA+DD+FILE RECORD
         10+058+NELS+DD+1+2+DATA := 0.0
         10+059+NELS+DD+1+3+DATA := 0.0
         10+060+NELS+DD+2+3+DATA := 0.0
         ;D+109+NFLS+TDDA+1+2+DATA := 0.0
         10+110+NELS+TD04+1+3+DATA 1= 0.0
         JD+111+NELS+TDOA+2+3+DATA I= 0.0
     END ENDFOREACH
   ENDI".
     DATE+ENTERED: 11282.
     DESCRIPTION:
              "THE TARGET ACQUISITION MODULE ESTIMATES EMITTER SIGNAL
   CHARACTERISTICS SUCH AS FREULENCY, BANDWIDTH, EFFECTIVE PADIATED
   POWER, AND MODULATION TYPE: IT ALSO ESTIMATES EMITTER TIME DIFFERENCE UF ARRIVAL (TODA) AND DIFFERENTIAL DOPPLER (DD)
   INFORMATION FOR EACH DETECTABLE EMISSION RELATIVE TO EACH SENSOR
   PLATFORM".
     ENTERED+RY: "JJF-NELS".
     GAMMAI
       WVAR SSTEMPR : REAL
```

```
;SSTEMPR := D+010+ASP+ALTITUDE+DATA
    :SSTEMPR := D+014+ASP+LOC+X+DATA
     FOR EACH F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
      CREATE F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD
      ;D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
        D+150+NELS+EMITTER+FREGUENCY+BANDWIDTH+DATA
      :D+077+NELS+FMITTER+MODULATION+TYPE+DATA := MODULATED
       :D+078+NFLS+FMITTER+POWEF+LEVEL+DATA :=
        D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
       ;D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+152+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA
       CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE RECORD
      ;D+157+NELS+EMISSION+DURATION+DATA :=
        D+147+NELS+EMISSION+DUPATION+DATA
       :0+158+NELS+EMISSION+START+TIME+DATA :=
        D+149+NELS+EMISSION+START+TIME+DATA
       :D+160+NELS+EMITTER+ID+DATA := D+151+NELS+EMITTER+ID+DATA
       ID+162+NELS+EMITTER+X+DATA 1=
        D+153+NELS+EMITTER+X+DATA
       D+163+NELS+EMITTER+Y+DATA 1=
        D+154+NELS+EMITTER+Y+DATA
       1D+164+NELS+FMITTER+Z+DATA 12
         D+155+NELS+EMITTER+Z+DATA
       10+165+SCENARIC+GEN+ID+NUM+DATA 1=
        D+156+SCENARIO+GFN+ID+NUM+DATA
    END ENDFOREACH
     *CREATE F+24+NELS+TDOA+DO+FILE RECORD
     ;D+058+NELS+DD+1+2+DATA := 0.0
     ;D+059+NELS+DD+1+3+DATA := 0.0
     10+060+NELS+DD+2+3+DATA 1= 0.0
     ;D+109+NELS+TDOA+1+2+DATA := 0.0
     10+110+NELS+TD0A+1+3+DATA := 0.0
     10+111+NELS+TD0A+2+3+DATA := 0.0
  END:".
     INPUTS:
                 D+011+ASP+ATTITUDE+DATA
         DATA:
         DATA:
                 D+013+ASP+LOCATION+DATA
         DATAL
                 D+020+ASP+STATE+VECTOR+DATA
         FILE:
                 F+12+DETECTED+CANDIDATE+TARGETS+FILE.
    OUTPUTS:
         FILE:
                F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
         FILE
                F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE
         FILE: F+24+NELS+TDOA+DD+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+TARGET+ACQUISITION.
    REFERRED BY:
         SUBNET:
                  S+3+MODEL+NELS+GPS+PROCESSING+SUB.
ALPHA: A+22+NELS+TERRAIN+FOLIAGE+SHADOWING+ALPHA.
     PETAL
            "VAR DRFAL : REAL!
  REGIN
    DREAL := D+018+ASP+PITCH+DATA
     JOREAL IS DOOLOGASPHALTITUDE+DATA
     DREAL := D+014+ASP+LOC+X+DATA
    FOR EACH F+08+HYPSO+DATA+FILE RECORD DO
       DREAL 1= D+051+HYPSO+ELEV+DATA ENDFOREACH
     FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
```

```
CREATE F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD
      :D+147+NELS+EMISSION+DURATION+DATA :=
        D+061+NELS+EMISSION+DURATION+DATA
      ; D+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
        D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
      10+149+NELS+EMISSION+START+TIME+DATA 12
        D+063+NELS+EMISSION+START+TIME+DATA
      10+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA 1=
        D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
      ;D+151+NELS+EMITTER+ID+DATA := D+075+NELS+EMITTER+ID+DATA
    :D+153+NEL5+EMITTEP+X+DATA :=
       D+085+NELS+EMITTER+X+DATA:
     D+154+NELS+EMITTER+Y+DATA :=
       D+086+NELS+EMITTER+Y+DATA ;
     D+155+NELS+EMITTER+Z+DATA :=
       D+087+NELS+EMITTER+Z+DATA ;
      D+152+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
      ;D+156+SCENARIG+GEN+ID+NUM+DATA :=
        D+130+SCENARTO+GEN+ID+NUM+DATA
 END ENDFOREACH
END;".
  DATE+ENTERED: 11182.
  DESCRIPTION:
          "THE FINAL PROCESS IN MODELLING EMITTER DETECTABILITY
IS TO ELIMINATE ANY EMITTERS WITHIN THE CANDIDATE TARGET LIST
WHICH CANNOT BE DETECTED BY THE NELS AIRBORNE SENSOR RECEIVERS
DUF TO TERRAIN SHADOWING: THE TERRAIN SHADOWING ALGORITHM SCANS
THE HYPSOGRAPHIC DATA ALONG A LINE-OF-SIGHT VECTOR CONNECTING THE
SENSOR AND THE EMITTER: IN ORDER TO PERFORM A LOCATION ESTIMATE
ON THE EMITTER, THE EMITTER MUST BE DETECTABLE BY AT LEAST TWO OF
THE AIRBORNE SENSOR PLATFORMS".
 ENTERED+BY: "JJF-NELS".
  GAMMA:
     "VAR SSTEMPR : REAL
          ISSFILTER : ROOLFAN
          :SSRAND : REAL
 ;FUNCTION SSRANDU : RFAL
   :BEGIN
     SSRAND := 29.0 * SSRAND + 357.0
     :SSRAND := SSRAND - TPUNC(SSRAND)
     ISSRANDU IT SSRAND
  END
 *PEGIN
   SSTEMPR := D+018+ASP+PITC++DATA
   :SSTEMPR := D+010+ASP+ALTITUDE+DATA
   :SSTEMPR := D+014+ASP+LOC+X+DATA
   SELECT FIRST RECORD FROM
           F+08+HYPSO+DATA+FILE
   :SSTEMP9 := D+051+HYPS0+ELEV+DATA
   (+ SINCE IT IS IMPRACTICAL TO MODEL THIS PROCESS WITHOUT +)
   (* DIPECT ACCESS FILES, A RANDOM NUMBER GENERATOR WILL BE *)
   (* FMPLOYED. *)
   :SSRAND := 0.450192
   :FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
     IF SSRANDU >= 0.5 THEN BEGIN
       CREATE F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD
       ID+147+NELS+EMISSION+DURATION+DATA IN
```

i

```
D+061+NFLS+EMISSION+DURATION+DATA
          ID+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA IF
            D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
          10+149+NELS+EMISSION+START+TIME+DATA 1=
            D+063+NFLS+EMISSION+START+TIME+DATA
          ID+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
            D+073+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA
          ID+151+NELS+EMITTER+IC+DATA 1=
            D+075+NFLS+FMTTTER+ID+DATA
          ID+153+NELS+EMITTER+X+DATA IF
            0+085+NELS+EMTTTER+X+DATA
          104154+NELS+EMITTER+Y+DATA :=
            D+OP6+NELS+EMITTEP+Y+DATA
          IN+155+NELS+EMITTFH+Z+DATA :=
            D+OB7+NELS+FMITTER+Z+DATA
          ID+152+MELS+EMITTER+TRANSMISSION+FREUMEMCY+DATA I=
            D+091+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          ID-156+5CFNARID+GEN+ID+NUM+DATA I=
            D+130+SCENARIO+GEM+ID+NUM+DATA
        ENU
     END ENDFOREACH
   END,"
     INPUTS:
          DATAL
                D+011+ASP+ATTITUDE+DATA
          DATAL
                 D+013+ASP+LOCATION+DATA
          DATA:
                 D+020+ASP+STATF+VECTOR+DATA
          FILF:
                F+08+HYPSO+DATA+FILE
          (* USED BUT NOT UPDATED *)
          FILE: F+13+NFLS+CANDIDATE+TARGETS+FILE.
     <u>RUTPUTS</u>
          FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REGHIGEMENT: URIG+REG+NELS+TFRRATN+SHADOWING.
     REFERRED BY:
          SUBNET:
                  S+5+MODEL+NELS+SENSOR+SUP.
ALPHA:
        A+23+NELS+THREAT+TABLE+UPDATE+ALPHA.
     BETA:
            *BEGIN
    FOR EACH F+25+NFLS+TYPED+EMITTER+REPORT+FILE RECURD DO BEGIN
      CREATE F+13+NFLS+EMISSION+THREAT+TARLE+FILE RECORD
       ID+182+NELS+EMITTEP+RANDHIDTH+DATA IM
          D+176+NELS+FMITTER+PANDWIDTH+DATA
        #P+183+NELS+EMITTER+CEP+DATA #= D+177+NFLS+EMITTER+CEP+DATA
        ID+171+NELS+EMITTFR+ID+DATA := D+166+NELS+EMITTFR+ID+DATA
       :D+173+NELS+FMITTEP+X+DATA :=
          D+167+NELS+FMITTEH+X+FATA;
        D+174+NELS+FMITTER+Y+FATA :=
          D+168+NELS+FMITTER+Y+CATA ;
        D+175+NELS+EMITTEP+7+PATA :=
          D+169+NELS+FMITTER+7+DATA :
        D+181+NELS+FMITTER+MODULATION+TYPF+DATA :=
          D+178+NELS+EMITTER+MODULATION+TYPE+DATA
        ID+079+NELS+EMITTER+TIME+OF+LOCATOIN+DATA IR
          D+179+NELS+FMITTEP+TIME+OF+LOCATOIN+DATA
        ID+080+NELS+EMITTER+TRAFFIC+TYPE+DATA 1=
          D+180+NELS+EMITTER+TRIFFIC+TYPE+DATA
        ID+172+NELS+EMITTFR+TRANSMISSION+FREQUENCY+DATA :=
```

```
D+172+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
     END
     FNDFOREACH
     END:".
DATE+ENTERED: 11282.
DESCRIPTION: "MAINTAINS THE NELS TARGET THREAT TABLE".
 ENTERED+RY: "JJF-NELS".
GAMMA:
    "BEGIN
SELECT FIRST RECORD FROM
             F+25+NFLS+TYPEC+EMITTER+REPORT+FILF
; IF FOUND THEN REGIN (* IS THERE ANYTHING ON UPDATE LIST. *)
  SFLECT FIRST RECORD FROM
         F+13+NELS+EMTSSION+THREAT+TABLE+FILE
  ; IF FOUND THEN BEGIN (* UPDATE EXISTING TABLE. FLSE BUILD *)
                       (* TABLE. *)
    (* IF IT'S IN THE TABLE, UPDATE IT. ELSE ADD A NEW PECORD. *)
    INHILE FOUND DO REGIN
   IF (D+171+NELS+EMITTFR+ID+DATA = D+166+NFLS+FMITTER+TD+DATA)
   AND
      (SUPT (
      SOR(D+173+NELS+FMITTER+X+DATA - D+167+NFLS+EMITTEP+X+DATA)
      SGRID+168+NELS+FMITTEP+Y+DATA - D+174+NFLS+FMITTEP+Y+DATA)
      ) < = 1000.0
      THEN REGIN
     D+173+NELS+EMITTER+X+CATA 1=
        D+167+NELS+EMITTER+X+DATA;
      D+174+NELS+EMITTER+Y+DATA I=
        D+168+NFLS+EMTTTEP+Y+DATA :
      D+175+NFLS+FMITTER+Z+PATA :=
        D+169+NELS+EMTTTER+Z+DATA :
        D+183+NFLS+EMITTER+CEP+DATA 1=
          D+177+NFLS+FMITTEF+CEP+DATA
        :SELECT FIRST RECORD FROM
                F+13+NELS+EMISSIUN+THREAT+TABLE+FILE
        SELECT FIRST RECORD FROM
                F+25+HELS+TYPEO+EMITTFR+REPORT+FILE
      END
      ELSE BEGIN
        SPLECT NEXT RECORD FROM
               F+13+NFLS+FMISSION+THREAT+TAPLF+FILE
     END
   END (* WHILE *)
 END
  ELSF REGIN
    CREATE F+13+NELS+FMTSSICH+THREAT+TABLE+FILE RECORD
    10+182+NELS+EMITTFR+BANDWTOTH+DATA :=
      D+176+NFLS+FMITTER+BANDWIDTH+DATA
    INFIBSTRELSTEMITTERFCEPFDATA := D+177+NFLSFFMITTERFCEPFDATA
    ID+171+NELS+EMITTER+ID+CATA := D+166+NELS+EMITTER+ID+DATA
    :D+173+NELS+EMITTFR+X+DATA :=
      D+167+NELS+EMTTTEP+X+PATA;
     D+174+NELS+EMITTER+Y+DATA 1=
      U+168+NELS+EMITTER+Y+FATA :
     D+175+NELS+EMITTER+Z+DATA :=
      D+169+NELS+EMITTER+7+CATA
    ; P+181+NELS+EMITTF#+AODLLATION+TYPE+DATA :=
```

```
D+172+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
     END
     FNDFOREACH
     END;".
 DATE+ENTERED: 11282.
 DESCRIPTION: "MAINTAINS THE NELS TARGET THREAT TABLE".
 ENTERED+RY: "JJF=NELS".
 GAMMA:
     "BEGIN
SELECT FIRST RECORD FROM
             F+25+NFL9+TYPEC+EMITTER+REPURT+FILE
FIF FOUND THEN BEGIN (* IS THERE ANYTHING ON UPDATE LIST. *)
  SFLECT FIRST RECORD FROM
         F+13+NELS+EMTSSIDN+THREAT+TARLE+FILE
  FIF FOUND THEN BEGIN (* UPDATE EXISTING TABLE. FLSE BUILD +)
                       (* TABLE. *)
    (* IF IT'S IN THE TABLE, UPDATE IT, ELSE ADD A NEW PECORD. *)
    INHILE FOUND DU HEGIN
   IF (P+171+NELS+EMITTFR+IP+DATA = U+166+NFLS+FMITTER+TD+DATA)
   AND
      (SGPT (
      SOR(D+173+NELS+FMITTER+X+DATA = D+167+NFLS+FMITTER+X+DATA)
      SGRED+166+NELS+FMITTEP+Y+DATA - D+174+NFLS+FMITTEP+Y+DATA)
      ) <= 1000.0)
      THEN REGIN
     10+173+NELS+EMITTER+X+CATA 1=
        D+167+NELS+EMITTER+X+DATA;
      D+174+NELS+EMITTER+Y+DATA 1=
        D+168+NFLS+EMITTER+Y+DATA 1
      U+175+NFLS+FMITTER+Z+PATA :=
        D+169+NELS+EMTTTER+Z+DATA ;
        D+183+NFLS+EMITTER+CEP+DATA 1=
          D+177+NFLS+FMITTEC+CEP+DATA
        SELECT FIRST RECORD FROM
                F+13+NELS+EMISSIUN+THREAT+TABLE+FILE
        SELECT FIRST RECORD FROM
                F+25+HELS+TYPEO+EMITTFR+REPORT+FILE
      END
      ELSE PEGIN
        SFLECT NEXT RECORD FROM
               F+13+NFLS+FMISSION+THREAT+TAPLF+FILE
      END
    END (* WHILE *)
  END
  ELSF REGIN
    CREATE F+13+NELS+FMISSION+THREAT+TABLE+FILE RECORD
    ID+182+NELS+EMITTER+BANDWIDTH+DATA IS
      D+176+NELS+PHITTER+BANDWIDTH+DATA
    ING1834NELSGEMITTERGCEPGDATA II DG1776NELSGEMITTERGCEPGDATA
    :D+171+NELS+EMITTFR+ID+DATA := D+166+NELS+EMITTER+ID+DATA
    :D+173+NELS+EMITTER+X+DATA :=
      D+167+NELS+EMTTTEP+X+PATA;
     D+174+NELS+EMITTFR+Y+DATA :=
      U+168+NELS+FMITTER+Y+FATA ;
     D+175+NELS+EMITTER+Z+DATA :=
      D+169+NELS+EMITTER+7+CATA
    ; P+181+NELS+EMITTFR+HCDLLATTON+TYPE+DATA :=
```

```
D+178+NELS+EMITTER+MODULATION+TYPE+DATA
        :D+079+NELS+EMITTFR+TIME+OF+LOCATION+DATA :=
          D+179+NELS+EMITTER+TIME+OF+LOCATION+DATA
        10+080+NELS+EMITTFR+TRAFFIC+TYPE+DATA :=
          D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA
        10+172+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
          U+074+NELS+EMITTER+FREQUENCY+DATA
      END
   END
 END, ",
     INPUTS:
          FILE:
                F+13+NELS+EMISSION+THREAT+TABLE+FILE
          FILE: F+25+NELS+TYPEC+EMITTER+REPORT+FILE.
    OUTPUTS:
          FILE
                F+13+NFLS+EMISSION+THREAT+TABLE+FILE.
     TRACED FROM:
          ORIGINATING CREQUIPEMENT: ORIGERER ONELS CHAREAT CTARLE OUPDATE
     PEFERRED BY:
                   S+3+MODEL+MELS+GPS+PRODESSING+SUR.
          SUBNET:
ALPHA: A+24+PESET+NELS+ALPHA.
     BETA: "BEGIN ENO:".
     DATE+ENTERED: 11182.
     DESCRIPTION:
             *REMOVES TARGET AND WEATHER INFORMATION FROM HEING
   AVAILAPLE".
     ENTERED+RY: "JJF-NFLS".
     GAMMAE
      "REGIN
       END:".
     DESTROYS:
          ENTITY+CLASS:
                         FC+2+NELS+SCENARIO+EC
          ENTITY+CLASS:
                        FC+3+NFLS+TASKS+EC
          ENTITY+CLASS:
                         FC+4+NELS+THREAT+EC
          ENTITY+CLASS:
                         FC+5+NELS+VEHICLE+CHARACTERISTICS+EC
                         FC+6+UFIFCTED+FMISSIONS+INFO+EC.
          ENTITY+CLASS:
     TRACED FROM:
          OPIGINATING+REGHIREMENT: UPIG+REQ+TC+CYCLE+START.
     PEFEFRED BY:
          RENET: RESEMPORTENELS + SENSOR + SYSTEM + REPUET.
ALPHA:
       A+25+UPDATE+CARTU+ALPHA.
     BETAS
           "VAR OREAL : RFAL;
  BEGIN
    FOR EACH F+02+CARTO+UPDATE+FILE RECORD DO
      DREAL IS 0+033+CARTO+UPDATE+X+OATA ENDFOREACH
    ID+028+CARTO+"AP+SECT+NUM+OATA :=
     D+028+CARTO+MAP+SECT+NUM+DATA
    FOR EACH F+01+RRIDGE+LOCATIONS+FILE RECURD DO
      DREAL 1= D+026+BRIDGE+LOC+X+DATA ENDFOREACH
    FOR EACH F+03+CITY+LOCATIONS+FILE RECORD DO
      DPEAL IS De035+CITY+LOC+x+DATA ENDFOREACH
    FOR EACH F+08+HYPSO+DATA+FILE RECORD DO
      DREAL := D+051+HYPSO+ELEV+DATA FNDFORFACH
    IFOR EACH F+09+MARSHALLING+ARFAS+FILE RECORD DO
      DREAL := D+954+MARSHALLING+X+DATA ENDFOREACH
```

```
FOR EACH F+28+PRIMARY+RUADS+FILE RECORD DO
    DREAL := D+121+PRIMARY+RJAUS+X+PATA ENDFOREACH
  FOR EACH F+29+PAJLROAD+LOCATIONS+FILE RECORD DO
    DPEAL : # D+123+RAILROAD+LOC+X+DATA ENOFOREACH
  FOR FACH F+30+PIVER+LOCATIONS+FILE RECORD DO
   OREAL 18 D+128+PIVER+LOC+X+DATA ENDFOREACH
  :FUR EACH F+31+SECONDARY+POADS+FILE RFCORD DO
    DREAL := D+131+SECONDARY+ROAD+X+DATA ENPENREACH
END; ".
  DATE+ENTERED: 11482.
   DESCRIPTION: "UPDATES CAPTO FILE(S) WITH REVISED DATA FROM ASE".
   FNTERED+RY: "JJF-NELS".
   GAMMA:
     MVAR SSTEMPI : INTEGER
          ISSUPDATE : BOOLEAN
          :SSTEST : BOOLEAN
          ISSOSOTEMP : EEOO+030+CARTO+UPDATE+1+DATA
 !BFGIN
   FOR EACH F+02+CARTO+HPDATE+FILE RECORD DO BEGIN
     SS030TEMP 1= 0+030+CARTO+UPDATE+1+DATA
     :SS030TEMP := D+031+CARTO+UPDATE+2+D'TA
     ISSTEMPI := D+028+CAPTO+MAP+SECT+NUM DATA
     :SSTEMPI := D+029+CARTO+SECTION+NUM+DATA
     JCASE D+032+CARTO+UPDATE+3+DATA OF
       BRIDGE : BEGIN
         SELECT FIRST RECORD FROM
                F+01+BRIDGE+LCCATIONS+FILE
         ISSUPDATE IT FALSE
         :SSTEST := FOUND
         ; WHILE SSTEST DO BEGIN
           IF (D+033+CARTO+UPDATE+X+DATA #
               D+026+PRIDGE+LCC+X+DATA) AND
              (9+034+CARTO+UPDATE+Y+DATA #
               D+027+BRIDGE+LOC+Y+DATA) THEN REGIN
             D+026+BRIDGE+LOC+X+DATA :=
               D+033+CARTO+UPDATE+X+DATA
             #D+027+BRIDGE+LOC+Y+DATA #=
               D+034+CAPTO+UPDATE+Y+DATA
             ISSTEST := FALSE
             ISSUPDATE := TRUF
           END
           FLSE BFGIN
             SELECT NEXT RECORD FROM
                    F+01+RRIDGE+LOCATIONS+FILE
             :SSTEST := FOUND
           END
         END (* WHILE *)
         I IF NOT SSUPPATE THEN BEGIN
           CREATE F+01+BRIDGE+LOCATIONS+FILE RECORD
           :D+026+BRIDGF+LOC+X+DATA :=
             D+033+CARTO+UPDATE+X+DATA
            10+027+BRIDGE+LOC+Y+DATA 1=
             D+034+CARTO-UPDATE+Y+DATA
         END
       END
       CITY : BEGIN
         SELECT FIRST RECORD FROM
                F+03+CITY+LOCATIONS+FILE
```

;SSUPDATE := FALSE
;SSTEST := FOUND
;WHILE SSTEST DO BEGIN
IF (D+033+CARTO+UPDATE+X+DATA =
D+035+CITY+LOC+X+DATA) AND
(D+034+CAPTO+UPDATE+Y+DATA =
D+036+CITY+LOC+Y+DATA) THEN BEGIN
D+035+CITY+LOC+X+DATA :=
D+033+CARTO+UPDATE+X+DATA
;D+036+CITY+LOC+Y+DATA :=
D+034+CARTO+UPDATE+Y+DATA
;SSTEST := FALSE
;SSUPDATE := TRUE

```
END
    ELSE BEGIN
      SELECT NEXT RECORD FROM
             F+03+CITY+LOCATIONS+FILE
      ;SSTEST := FOUND
    END
  END (* WHILE *)
  ; IF NOT SSUPDATE THEN REGIN
    CREATE F+03+CITY+LCCATTOMS+FILE RECORD
    10+035+CITY+LOC+X+PATA := D+033+CARTO+UPDATE+X+DATA
    :D+036+CTTY+LUC+Y+CATA := D+034+CARTO+UPDATE+Y+DATA
  END
END
PORDAD & REGIN
  SELECT FIRST RECORD FROM
         F+2M+PRTMARY+9UADS+FILE
  :SSUPDATE := FALSE
  :SSTEST := FOUND
  INHILE SSTEST DU HEGIN
    IF (D+033+CARTC+UPCATE+X+DATA =
        DE121+PRIMARY+ROADS+Y+DATA) AND
       (D+034+CAPTO+UPCATE+Y+DATA #
        De1226PRIMARYERGAUSEYEDATA) THEN BEGIN
      D+121+PRIMARY+POADS+X+DATA :=
        Denssecartneupnateexedata
      :U+122+PRIMARY+RCADS+Y+UATA :=
        NEO34+CARTOHUPPATEHY+DATA
    END
    FLSE BEGIN
      SELECT NEXT PECONO FROM
             F+026+PHIMARY+KOADS+FILE
      :SSTEST := FOULD
    END
  FND (* WHILE #1
  FIF NOT SSUPPLATE THEN REGIN
    CREATE FEZRAPRIMARYARDAUSAFILE RECORD
    ID+121+PRIMAPY+RUATS+X+DATA :=
      D+033+CAPTO+UPDATE+X+DATA
    ID+122+PRIMARY+PDADS+Y+DATA I=
      D+034+CARTOHIPPATE+Y+DATA
  END
END
PRAILROAD : BEGIN
  SELECT FIRST RECORD FROM
```

```
F+29+RAILROAD+LOCH.; ONS+FILE
 ISSUPDATE IN FALSE
 ISSTEST := FOUND
 , WHILE SSTEST DO BEGIN
   IF (D+033+CARTO+UPDATE+X+DATA #
        D+123+RATLPD40+LOC+X+DATA) AND
       (P+034+CARTO+UPSATE+Y+DATA #
        D+124+RAILROAD+LOC+Y+DATA) THEN REGIN
     D+123+RATLRUAD+LGC+X+DATA ##
        Den33+CARTO+UPDATE+X+DATA
      1D+124+RAILROAD+LOC+Y+DATA 1=
        D+034+CARTO+UPDATE+Y+DATA
      ISSTEST I= FALSE
      ISSUPPLATE IF TRUE
    END
    FLSE BFGIN
      SELECT NEXT RECORD FROM
             F+29+RAILROAD+LOCATIONS+FILE
      :SSTEST := FOUND
    END
  END (* WHILE *)
  I IF NUT SSUPPATE THEN REGIN
    CHEATE F+29+RATLPOAU+LOCATIONS+FILE RECORD
    1D+123+RAILROAD+LOC+X+DATA 1=
      D+033+CARTO+UPCATE+X+DATA
    :D+124+RAILROAD+LOC+Y+9ATA 1=
      D+124+RAILPOAD+LCC+Y+DATA
  END
END
S+KOAD : PEGIN
  SELECT FIRST RECORD FROM
         F+31+SECUNDARY+ROADS+FILE
  :SSUPDATE := FALSE
  :SSTEST := FOUND
  WHILE SETEST DU DEGIN
    IF (D+033+CAPTO+UPCATE+X+DATA =
        D+131+SECONDARY+POAD+X+DATA) AND
       (D+034+CARTO+UPDATE+Y+UATA =
        D+132+SECONDARY+ROAD+Y+DATA) THEN HEGIN
      D+131+SECONDARY+ROAD+X+DATA :=
        D+033+CARTO+HPDATE+X+DATA
      :0+132+SFCONDARY+ROAD+Y+DATA :=
        D+034+CARTO+UPDATE+Y+DATA
      :SSUPDATE := TRUF
      :SSIFST := FALSE
    END
    FLSE AFGIN
      SELECT NEXT RECORD FROM
             F+31+SECONDARY+POADS+FILE
      :SSTEST := FOUND
    END
  FND (* WHILE *)
  FIF NOT SSUPPATE THEN REGIN
    CREATE F+31+SFCONDARY+ROADS+FILE RECORD
    +D+131+SFCONDARY+RCAD+X+DATA 1=
      D+033+CAPTC+HPC4TE+X+04TA
    10+152+SECONDARY+RCAD+Y+PATA 1=
       D+034+CARTO+UPDATE+Y+DATA
```

```
D+034+CARTO+UPDATE+Y+DATA
      ISSUPPATE IN TRUE
      SSTEST := FALSE
    END
    ELSE BEGIN
      SELECT NEXT RECORD FROM
             F+09+MARSHALLING+AREAS+FILF
      ;SSTEST := FOUND
    END
  END (* WHILE *)
  FIF NOT SSUPDATE THEN BEGIN
    CREATE F+09+MARSHALLING+APEAS+FILE RECORD
    10+054+MARSHALLING+X+DATA 18
      D+033+CARTO+UPDATE+X+DATA
    10+055+MARSHALLING+Y+DATA 1=
      D+034+CARTO+UPDATE+Y+DATA
  END
END
PIVER : BEGIN
  SELECT FIRST RECORD FROM
         F+30+RIVER+LOCATIONS+FILE
  SSUPDATE := FALSE
  ISSTEST := FOUND
  INHILE SSTEST DO REGIN
    IF (D+033+CARTO+UPDATE+X+DATA = D+128+RIVER+LOC+X+DATA)
       AND
       (D+034+CARTO+UPDATE+Y+DATA = D+129+RIVER+LOC+Y+DATA)
       THEN BEGIN
      D+128+RIVER+LOC+X+DATA := D+033+CARTO+UPDATE+X+DATA
      JD+129+RIVER+LOC+Y+DATA := D+034+CART9+UPDATE+Y+DATA
      ISSUPDATE IT TRUE
      :SSTEST := FALSE
    END
    ELSE BEGIN
      SFLECT NEXT RECORD FROM
             F+30+RIVER+LOCATIONS+FILE
      ISSTEST := FOUND
    END
  END (* WHILE *)
  FIF NOT SSUPDATE THEN BEGIN
    CREATE F+30+RIVER+LOCATIONS+FILE RECORD
    ;D+128+RIVER+LOC+X+DATA := D+033+CARTO+UPDATE+X+DATA
```

```
:C+129+FIVER+LOC+Y+CATA := D+034+CARTD+UPDATE+Y+DATA
        END
      END
      HYPSO : BEGIN
        SELECT FIRST RECORD FROM
               F+08+HYPSO+DATA+FILE
        ;SSUPDATE := FALSE
        ISSTEST := FOUND
        IWHILE SSTEST DO REGIN
          IF (D+033+CARTO+UPDATE+X+DATA = D+052+HYPSO+LOC+X+DATA)
             AND
             (0+034+CARTO+UPDATE+Y+DATA # D+053+HYPSU+LOC+Y+DATA)
             THEN BEGIN
            D+052+HYPSU+LOC+X+DATA := D+033+CARTO+UPDATE+X+DATA
            ID+053+HYPSO+LOC+Y+D4TA I= D+034+CARTO+UPDATE+Y+DATA
            :D+051+HYPSO+ELF V+DATA := 0.0
            :SSUPDATE := TRUE
            :SSTEST : FALSE
          END
          ELSE PEGIN
            SFLECT NEXT RECORD FROM
                   F+08+HYPSO+DATA+FILE
            :SSTEST := FALSE
          END
        END (* WHILE *)
        ; IF NOT SSUPDATE THEN REGIN
          CREATE F+08+HYPSO+DATA+FILE RECORD
          10+052+HYPSO+LOC+X+DATA := 0+033+CARTO+UPDATE+X+DATA
          :D+053+HYPSO+LOC+Y+CATA 1= D+034+CARTO+UPDATE+Y+DATA
          ;D+051+HYPSO+FLEV+DATA := 0.0
        END
      END
    END (+ CASE +)
  END EMOFOREACH
END:"
   INPUTS:
        DATA:
              - DeG28+CAPTO+MAP+SECT+NUM+DATA
              F+01+B9INGE+1 OCATIONS+FILE
        FILE:
        FTLF:
              F+02+CARTG+UPDATE+FILE
              F+03+CITY+LOCATIONS+FILE
        FILF:
        FILE:
              F+08+HYPSO+DATA+FILE
              F+09+MARSHALLING+AREAS+FILF
        FILE:
        FILE:
              F+28+PRIMARY+ROADS+FILE
        FILE:
               F+29+RAILROAD+LOCATIONS+FILE
        FILF:
               F+30+RIVER+LOCATIONS+FILE
        FILE:
              F+31+SECONDAFY+ROADS+FILE.
   OUTPUIS:
               D+028+CARTO+MAP+SECT+NUM+DATA
        DATA:
        (* ANY MUMBER OF CAPTO FILES MAY BE UPDATED *)
               F+01+BRIDGE+LOCATIONS+FILE
        FILE:
        FILES
               F+03+CTTV+LOCATIONS+FILE
        FILE:
               F+08+HYPSU+DATA+FILE
        FILF:
               F+09+MARSHALLING+AREAS+FILE
        FILE:
               F+28+PPIMARY+RCADS+FILE
        FILE
               F+29+RAIL ROAD+LOCATIONS+FILE
        FILES
               F+30+HTVER+LOCATIONS+FILE
        FILE:
               F+31+SECONDARY+ROADS+FILE.
   TRACED FROM:
```

URIGINATING+REQUIREMENT: ...G+REQ+NELS+EXTERNAL+INTERFACE.
REFERRED BY:
R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+R+NET.

DATA: CLOCK+TIME. DESCRIPTION:

"A PREDEFINED DATA ITEM WHICH IS INCREMENTED AT THE SAME PATE AS ENGAGEMENT TIME. EXCEPT FOR ITS INITIAL+VALUE WHICH IS ARBITRARY, CLOCK+TIME MAY BE REGARDED AS ENGAGEMENT TIME. IT HAS NO CLOCK ERROR.".

LOCALITY: GLOBAL. TYPE: PEAL. UNITS: SECONDS. USE: BOTH.

DATA: D+001+ALTITUDE+WEATHER+LCC+DATA.

DATE+ENTERED: 11182.
DESCRIPTION: "WEATHER INFORMATION AT VARIOUS ELEVATIONS".
ENTERED+8Y: "JJF=NELS".

INCLUDES:

DATA: D+038+COMDITIONS+AT+ELEVATION+WEATHER+DATA

DATA: D+039+FLFVATION+WEATHER+DATA.

CONTAINED IN:

FILE: F+26+NELS+WEATHER+CONDITIONS+FILE.

TRACED FROM:

UPIGINATING+REQUIREMENT: URIG+REQ+NELS+SIGNAL+TO+NOISE.

DATA: D+002+ASET+MSG+DEST+DATA.

PATE+ENTERED: 90481.

DESCRIPTION: "PESTINATION OF MESSAGE".

ENTERED+RY: "JJF-TC".

RANGE: "TC,ES,ASE,MTT,C3I,NELS,WELS,IS,TC+OPERATOR".

TYPE: ENUMERATION.

USF: BOTH.

INCLUDED IN:

DATA: D+003+ASFT+MSG+ID+DATA.

TRACED FROM: DECISION+MESSAGE+HOUTING+METHOD.

DATA: D+003+ASET+MSG+1D+DATA.

DATE+ENTERED: 92481.

DESCRIPTION: "CONTAINS MESSAGE IDENTIFICATIONS".
ENTERED+BY: "JJF-TC".

RANGE :

"MN+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA,

MN+02+NELS+CARTO+UPDATES,

MN+03+NELS+COMMANDERS+REQUIREMENTS,

MN+04+NELS+MODIFIED+TASK,

MN+05+MELS+NON+SURVETLLAMCE+TAGGFT+REPORTS.

MN+06+NELS+ORBIT+MOUTFICATIONS,

MN+07+NELS+PLATFORM+LOCATION+REPORTS,

MN+OR+NELS+PPIORITIZED+SENSOR+DIRECTIONS,

MN+09+NELS+REQUESTFU+SENSOR+DATA,

MN+10+NELS+SFNSOR+REDUFSTS,

MN+11+MELS+SENSUR+SYSTEM+STATUS,

MN+12+NELS+STRVEILLANCF+TARGET+HEPORTS,

MN+13+NELS+TASKING+RFSPUNSES,

```
MN+14+NELS+TRACK+MESSAGE,
    MN+15+T+AND+C+STOP+NFLS".
    TYPE: ENUMERATION.
    INCLUDES:
                P+002+ASET+MSG+DEST+PATA
         DATAS
         DATAS
                D+004+ASFT+MSG+NAME+DATA
         DATA: DenoseASFTEMSGESOURCEEDATA.
    MAKES!
                   M+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN
         MESSAGE
         MESSAGE:
                   M+02+NELS+CARTO+UPDATES+MSG+IN
                   M+03+NELS+CCMMANDERS+REQUIREMENTS+MSG+IN
         MFSSAGE:
         MESSAGE: M+04+NELS+MODIFIED+TASK+MSG+IN
         MESSAGE:
                   M+05+NELS+NCN+SHRVEILLANCF+TARGET+REPORTS+MSG+DHT
                   M+O6+NELS+OFBIT+MODIFICATIONS+MSG+IN
         MESSAGE!
                   M+07+NELS+PLATFORM+LUCATION+REPORTS+MSG+OUT
          MESSAGE
          MESSAGE:
                   MEORENELSEPRIORITIZEDESENSOREDIRECTIONSEMSGEIN
          MESSAGE: M+09+NELS+REQUESTFO+SENSOR+DATA+MSG+IN
                   M+10+NELS+SENSOR+REQUESTS+MSG+OUT
         MESSAGE
          MESSAGET
                   M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT
                   M+12+NELS+SLRVEILLANCE+TARGET+REPORTS+MSG+OUT
          MESSAGE:
          MESSAGE:
                   ME13EHELSETASKINGERESPONSESEMSGEDUT
                   M+14+NELS+TRACK+MFSSAGE+ 'SG+OUT
          MESSAGE:
          MESSAGE: M+15+T+AND+C+STOP+NELS+M.G+IN.
     INPUT TU:
                  A+02+GEMEPATE+DME+ALPHA
          ALPHA:
          ALPHA:
                 A+17+NELS+SENSOR+STATUS+ALPHA.
    OUTPUT FROM:
                  A+02+GENEPATE+DHE+ALPHA
          ALPHA:
                  A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA
          ALPHA!
          AL PHA:
                  A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA:
                  A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA
                  A+17+NELS+SENSOP+STATUS+ALPHA
          ALPHA:
                  A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
          ALPHA:
     TRACED FROM:
          DECISION: DECISION+MESSAGE+ROUTING+METHOD.
DATA: D+004+ASET+MSG+NAMF+DATA.
     PATE+ENTERED: 90481.
     DESCRIPTION: "NAME OF MESSAGE".
     ENTERED+BY: "JJF-TC".
     PANGE:
 *MN+01+ES+NELS+UNIT+AND+FNVIRUMENT+DATA,
  MN+02+NFLS+CAPTD+UPDATES.
  MN+03+NFLS+CUMMANDERS+RFGHIPEMENTS,
  MN+04+NELS+HODIFIED+TASK,
  MN+05+NFLS+NUN+SUP VFILLANCE+TARGET+REPORTS,
  MN+06+NELS+PRRIT+"ODIFICATIONS,
  MN+07+NELS+PLATFORM+LOCATION+REPORTS,
  MN+08+NFLS+PRIURITIZED+SENSOR+DIRECTIONS.
  MA+09+NELS+PE JUFSTED+SENSOR+DATA.
  MN+10+NFLS+SENSOR+REQUESTS.
  MN+11+NELS+SENSOR+SYSTEM+STATUS.
  MN+12+NFLS+SURVFILLANCE+TARGET+REPORTS,
  MN+13+NELS+TASKING+PESPONSES,
  MN+14+NELS+TRACK+MESSAGE,
  MN+15+T+AND+C+STUP+NELS".
     TYPE: FNUMERATION.
```

USE: BOTH.

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INCLUDED IN:
          DATA: D+003+ASFT+MSG+ID+DATA.
     TRACED FROM:
          DECISION: DECISION+MESSAGE+HOUTING+METHOD
          DECISION: HIGHLY+SUSPECT+ITEM.
     REFERRED BY:
          RENET: REZEMODELENELSESSISORESYSTEMERENET.
DATA: D+005+ASET+MSG+SOURCE+DATA.
     DATE+ENTERED: 90481.
     DESCRIPTION: "SOURCE OF MESSAGE".
     ENTERED+8Y: "JJF-TC".
     PANGE: "TC, ES, ASE, MTT, C31, NELS, WELS, IS, TC+OPFRATOR".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+003+ASFT+MSG+ID+DATA.
     TRACED FROM:
          OFCISION: DECISION+MESSAGE+ROUTING+METHOD.
DATAL D+006+ASP+ACCELERATION+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION: "ASP ACCELERATION VECTOR".
     ENTEREDORY: "JJF-NFLS".
     INCLUDES:
          DATA:
                D+007+4SP+ACC+X+DATA
          DATA: Denoseaspeacheyenata
                Denogeaspeachezenata.
          DATA:
     INCLUDED IN:
          DATA: D+020+ASP+STATF+VECTOR+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT:
          ORIGORESO GENERATE + PLATFORM + MEASUREMENTS.
DATA: D+007+ASP+ACC+X+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "X ACCELERATION".
     FNTEPED+BY: "JJF=NFLS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: 0+006+ASP+ACCELERATION+DATA.
     TRACED FROM:
          ORIGINATING+REUNIREMENT:
          URIGHRED+GENERATE+PLATFORM+MEASUREMFNTS.
DATA: D+00R+ASP+ACC+Y+DATA,
     DATE+ENTFREU: 11182.
     DESCRIPTION: "Y ACCELERATION".
     FNTERED+BY: "JJF-NFLS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+004+4SP+ACCELERATION+DATA.
     TRACEU FROM:
          ORIGINATING+REDUIREMENT:
          URIGOREROGENERATEOPLATFORMOMEASUREMENTS.
```

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DATA: D+009+ASP+ACC+Z+DATA.
     DATE+ENTERED: 11182.
     PESCPIPTION: "Z ACCELERATION".
     FNTERER+RY: "JIF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+006+ASP+ACCELERATION+DATA.
     TRACED FRUM:
          ORIGINATING + REQUIREMENT:
          ORIGHRED+GENERATE+PLATFORM+MEASUREMENTS.
DATA: D+010+ASP+ALTITUDE+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "ALTITUDE OF ASP".
     ENTERED+RY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+013+ASP+LOCATION+DATA.
     THACED FROM:
          URIGINATING+REQUIREMENT: ORIG+PEO+GENERATE+INS.
DATA: N+011+4SP+ATTITUDE+DATA.
     PATE + ENTERED: 11182.
     DESCRIPTION: "ATTITUDE OF ASP".
     ENTERECHRY: "JJF-NELS".
     INCLUDES:
          DATA:
                D+018+ASP+PITCH+DATA
          :ATAC
                 D+019+ASP+ROLL+DATA
          DATA: D+025+45P+YAW+DATA.
     INPUT TO:
          ALPHA: A+01+DME+INS+NOISE+GENERATION+ALPHA
          ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETECTARILITY+ALPHA
          ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA
          ALPHA: A+22+NELS+TERRAIN+FOLIAGE+SHADOWING+ALPHA.
     OUTPUT FROM:
          ALPHA:
                  A+01+DME+INS+NOISE+GENERATION+ALPHA
          ALPHA: A+03+GENERATE+INS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+INS.
DATA: D+012+ASP+LATITUDE+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "LATITUDE OF ASP". ENTEREDERY: "JJF-NELS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+013+ASP+LOCATION+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REO+GENERATE+INS.
DATA: P+013+ASP+ATTITUDE+DATA.
```

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DATA: D+013+4SP+LOCATION+DATA.
     DATE+ENTERED: 11182.
     PESCRIPTION: "GEOGRAPHIC LOCATION OF ASP".
     ENTERED+BY: "JJF-NELS".
     INCLUDES:
          DATA: D+010+ASP+ALTITUDE+DATA
          DATA: 0+012+ASP+LATITUPE+DATA
          DATA: D+017+ASP+LONGITUDE+DATA.
     CONTAINED IN:
          FILE: F+27+PLATFORM+CONTROL+FILE.
     THEUT TO:
          ALPHA: A+01+DME+JNS+NOISF+GENERATION+ALPHA
          ALPHA: A+03+GENERATE+INS+ALPHA
          ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+18+NELS+SIGNAL+OF+INTFREST+FILTER+ALPHA
ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETFCTARILITY+ALPHA
ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA
                  A+22+NELS+TERRAIN+FOLIAGE+SHADOWING+ALPHA.
          ALPHA:
     OUTPUT FROM:
          ALPHA: A+01+DME+TN5+NOISE+GENERATION+ALPHA
          ALPHA: A+03+GENERATE+INS+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIGHREQ+GENERATE+INS.
DATA: D+014+ASP+LOC+X+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "X PUSITION OF ASP".
     FNTERED+RY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILF: F+27+PLATFORM+CONTRUL+FILE.
     INCLUDED IN:
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          OFIGINATING+REQUIREMENT: CRIG+REQ+GENERATE+DME.
DATA: P+015+ASP+LOC+Y+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "Y POSITION OF ASP".
     ENTEREDORY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+27+PLATFORM+CONTROL+FILE.
     INCLUDED IN:
          DATA: DECEMENTATE VECTOR+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REG+GENERATE+DME.
DATA: DE016+ASP+LOC+Z+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "7 POSITION OF ASP".
     ENTEREDORY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
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FILE: F+27+PLATFORM+CONTROL+FILE.
     INCLUDED IN:
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+PEQ+GENERATE+DME.
DATA: D+017+ASP+LUNGITUDE+PATA.
    CATE+ENTERED: 11182.
     DESCRIPTION: "LONGITUDE OF ASP".
     ENTERED+RY: "JJF+NFLS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+013+ASP+LUCATION+DATA.
     THACED FROM:
          ORIGINATING+REQUIPEMENT: ORIGERES+GEMERATE+INS.
DATAL DEGISEASPEPITCHEDATA.
    DATF + ENTERED: 11187.
     D' CPIPIIUN: "PITCH OF ASP".
     ENTERECHAY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLINED IN:
          DATA: P+011+ASP+ATTTTUPE+UATA.
     TRACED FROM:
          OPIGINATING + REQUIREMENT: ORIGHRER+GENERATE+INS.
DATA: P+019+4SP+POLL+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "ROLL OF ASP".
     FLITEREPORY: "JJF-NFLS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: DEDITEASPEATTITUDE +DATA.
     TRACEU FROM:
          ORIGINATING+REGHIREMENT: ORIGHPER+GENERATE+INS.
DATA: D+020+ASP+STATE+VECTOR+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION: "TIME POSTITON AND VELUCITY OF AN ASP".
     FNTEREDORY: "JJF-NFLS".
     INCLUDES
          DATAS
                - Denubeaspeaccelerationedata
          SATAS
                DED14-ASPELOCEREDATA
          DATAL
                 E+015+ASP+LOC+Y+DATA
          DATAS
                 De016+ASP+LOC+2+DATA
          DATA: D+021+ASP+TIME+DATA
          DATA: DEOZZEASPEVELEKEMATA
          DATA: 0+023+ASP+VEL+Y+DATA
          DATA: Den24+ASP+VEL+7+DATA.
     INPUT TO:
          AL PHA:
                 A+01+DMF+INS+NOISE+GENERATION+ALPHA
          ALPHA:
                 A+03+GEHERATE+INS+4LPHA
          ALPHA:
                 - 4+05+MELS+APEA+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+13+VELS+PLATFORM+LOCATION+MSG+ALPHA
```

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A+17+NELS+SENSDR+STATUS+ALPHA
          AL PHAT
          ALPHA: A+19+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETFCTARILITY+ALPHA
          ALPHA: A+21+NELS+TARRET+ACQUISITION+ALPHA
          ALPHA: A+22+NELS+TERFAIN+FOLIAGE+SHADOWING+ALPHA.
     PUTPUT FROM!
          ALPHA: A+01+DME+THS+NUTSE+GENERATION+ALPHA
          ALPHA: 4+02+GENERATE+DME+ALPHA.
     TRACEU FROM!
          ORIGINATING+REGUIREMENT: URIG+PEG+GENERATE+DME.
DATA: N+021+ASP+TIME+DATA:
        .. ENTEREU: 11182.
     DESCRIPTION: "TIME POSITION HEADING IS MADE".
     ENTERED+RY: "JJF-NELS".
     TYFE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: C+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQ+GENERATE+DME.
DATA: D+027+4SP+VEL+X+DATA.
     DATE+ENTERED: 11182.
     rescription: "y velocity of asp".
     ENTERED+BY: "JJF-NFLS".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+27+PLATFORM+CONTPOL+FILE.
     INCLUDED IN:
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          ORIGINATING+REUUIREMENT: OPIG+REG+GENERATE+DME.
DATA: D+023+ASP+VFL+Y+OATA.
     PATE - ENTERED: 11182.
     DESCRIPTION: "Y VELOCITY OF ASP".
     ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED INT
          FILE: F+2/+PLATFORM+CONTROL+FILE.
     INCLUDED IN:
          DATA: B+020+4SP+STATE+VECTOR+U4TA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQ+GENERATE+DME.
DATAL DACZULASPHVELLYTHDATA.
     DATE LENTERFOR 11142.
     DESCRIPTION: "Z VELOCITY OF ASP".
     PATERED+RY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+27+PLATFORM+CONTROL+FILE.
     INCLUDED 141
          DATA: D+020+ASP+STAT5+VECTOR+DATA.
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TRACED FROM:
            ORIGINATING+REDUIREMENT: ORIG+REQ+GEMERATE+DME.
  DATA: D+025+ASP+YAW+DATA_
       DATE+ENTERED: 11182.
       DESCRIPTION: "YAW OF ASP".
       ENTERED+RY: "JJF-NELS".
       TYPE: PEAL.
       HISE: BOTH.
       INCLUDED IN:
            DATA: D+011+4SP+ATTITUDE+DATA.
       TRACED FROM:
            ORIGINATING+REUNIREMENT: ORIG+RED+GEMERATE+INS.
  DATA: N+026+RRIDGE+LDC+X+DATA.
       TYPE: PEAL.
       USE: BOTH.
       CONTAINED INT
            FILE: F+01+BRINGE+1 OCATIONS+FILE.
  DATA: D+027+BRIDGE+LOC+Y+DATA.
       TYPE: REAL.
       USE: BOTH.
       CONTAINED IN:
            FILE: F+01+8RIDGF+LOCATIONS+FILE.
  DATA: DECEMENTO HAPESECTENUMEDATA.
       TYPE: INTEGER.
       USF: BOTH.
       THOUT TU:
            ALPHA: A+25+UPDATE+CARTO+ALPHA.
       CUTPUT FRUM:
            ALPHA: A+25+UPDATE+CARTO+ALPHA
             (* ANY NUMBER OF CAPTO FILES MAY RE UPDATED *).
  DATA: D+029+CARTO+SECTION+NUM+DATA.
       DATE+ENTERED: 10882.
       DESCRIPTION: "CARTOGRAPHIC SECTION NUMBER".
       FNTERED+PY: "JJF=NFLS".
       TIPE: INTEGER.
       USF: BOTH.
       ORDERS:
            FILE: F+02+CARTO+UPDATE+FILE.
       CONTAINED IN:
            FILE: F+02+CARTO+UPDATE+FILE.
       TRACED FROM:
            DRIGINATING+REQUIREMENT: OPIC+PEC+NELS+EXTERNAL+INTERFACE.
  DATA: 0+030+CARTO+UPDATE+1+UATA.
       DATE+ENTERED: 10882.
       DESCRIPTION: "PRESENTLY HAKNOWN HPDATE ITEM".
       ENTEREPOSY: "JJF-NELS".
       PANGET
*BRINGF,RATLROAD,P+ROAD,S+ROAD,CITY,RIVER,MARSHALLING,HYPSO*.
        TYPE: FNUMERATION.
       USF: BOTH.
       CONTAINED IN:
            FILE: F+92+CARTU+UPDATE+FILE.
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TRACED FROM:
             OPIGINATING+REQUIREMENT: OPIG+PEO+NELS+EXTERNAL+INTERFACE.
  DATA: C+C31+CARTC+UPDATE+2+DATA.
        DATE+ENTERFD: 10852.
        DESCRIPTION: "PRESENTLY UNKNOWN UPDATE ITEM".
        ENTERED+RY: "JJF-NFLS".
        PANGE:
"BRIDGE, PAILPGAD, P+RGAD, S+PGAD, CITY, RIVER, MARSHALLING, HYPSO".
        TYPE: FNUMERATION.
        USF: BOTH.
        CONTAINED INT
            FILE: F+02+CARTO+UPDATE+FILE.
        TRACED FROM:
             ORIGINATING+REGHIREMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
   DATA: D+032+CARTD+UPDATE+3+DATA.
        DATE+ENTERED: 10882.
        DESCRIPTION: "PRESENTLY UNKNOWN UPDATE ITEM".
        ENTERED+RY: "JJF-NELS".
        PANGE
"BRIDGE, PATLPOAD, P+ROAD, S+ROAD, CITY, RIVER, MARSHALLING, HYPSO".
        TYPE: ENUMERATION.
        USF: BOTH.
        CONTAINED INT
             FILE: F+02+CARTU+UFDATE+FILE.
        TRACED FROM:
             ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
   DATA: P+033+CARTU+UPDATE+X+DATA.
        DATE+ENTERED: 10882.
        DESCRIPTION: "X COORDINATE OF CARTOGRAPHIC FEATURE".
        ENTERED+BY: "JJF-NELS".
        TYPE: PEAL.
        USE: BOTH.
        CONTAINED IN:
            FILE: F+02+CARTO+UPDATE+FILE.
        TRACED FROM:
             ORIGINATING+REGUIPEMENT: ORIG+REG+NELS+EXTERNAL+INTEPFACE.
   DATA: D+034+CARTD+UPDATE+Y+DATA.
        DATE+ENTERED: 10862.
        DESCRIPTION: "Y COORDINATE OF CARTOGRAPHIC FEATURE".
        ENTERED+RY: "JJF-NELS".
        TYPE: PEAL.
        USE: BOTH.
        CONTAINED IN:
             FILE: F+12+CARTO+UPDATF+FILE.
        TRACED FROM:
             OPIGINATING+REQUIREMENT: ORIGHREQ+NELS+EXTERNAL+INTERFACE.
   DATA: D+035+CITY+LOC+X+DATA.
        TYPE: PEAL.
        USF: ANTH.
        CUMTAINED IN:
             FILE: F+03+CITY+LOCATIONS+FILE.
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DATA: D+036+CITY+LOC+Y+DATA.

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TYPE: REAL. USE: BOTH. CONTAINED IN FILE: F+03+CITY+LOCATIONS+FILE.

DATA: D+037+CLOUD+COVER+DATA. DATE+ENTERED: 11182. DESCRIPTION: "CLOUD COVER". ENTEREC+RY: "JJF-NELS". PANGE :

"CLEAR, PARTLY+CLOUDY, MOSTLY+CLOUDY, OVERCAST, FOGGY, SMOG, DUST".

TYPE: ENUMERATION.

USE: BOTH. INCLHOPD IN:

DATA: De03R+CONDITIONS+AT+ELEVATION+WEATHER+DATA.

TRACED FROM:

OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+SIGNAL+TO+NOISE.

DATA: D+038+CONDITIONS+AT+ELEVATION+WEATHER+DATA.

DATE+ENTERED: 11182.

DESCRIPTION:

"CLOUD COVER AND PRECIPITATION DATA AT A SPECIFIC

ALTITUDE". FNTERED+RY: "JJF-NELS".

INCLUDES:

DATA: D+037+CLOUD+COVER+DATA

DATA: D+120+PRECIPITATION+DATA.

INCLUDED IN:

DATA: 0+001+ALTITUDE+WEATHER+LOC+DATA.

TRACED FROM:

OPIGINATING+REGHIPEMENT: OPIG+REG+NELS+SIGNAL+TO+NOISE.

DATA: DE039+FLEVATION+HEATHER+DATA.

DATE+ENTERED: 11182.

DESCRIPTION: "FLEVATION".

FNTERED+RY: "JJF-NELS".

TYPE: PEAL.

UNITS: METERS.

USE: BOTH.

INCLUDED IN:

DATA: D+001+ALTITUDE+WEATHER+LOC+DATA.

TRACED FROM:

UPIGINATING+REGHIREMENT: ORIG+REG+NELS+SIGNAL+TO+NOISE.

DATA: 0+040+FIRST+CMDRS+REQ+UPDATE+DATA.

DATE+ENTERED: 91581.

DESCRIPTION: "A COMMANDERS REQUIREMENT UPDATE MESSAGE LOCATION".

ENTEREDORY: "O HAPTSCHUH",

PANGE: "IN+AREA, OUTSIDE+ARFA".

TYPE: ENUMERATTON.

USF: BOTH.

CONTAINED IN:

FILE: F+04+CMDPS+DATA+TO+UPDATE+FILE.

THACED FROM:

OFCISION: COMITENTS+OF+MESSAGE.

DATA: PEGHIEFLIGHTEMAYPOINTEXEGATA. DATE+E"TERED: 11182.

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DESCRIPTION: "FAST-WEST DISTANCE".
     ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN:
          FILF: F+06+FLIGHT+PRCFILE+FILE.
     TRACED FRUM:
          URISINATING+REGNIPEMENT:
          UPIGERE REGENERATE + PLATFORM + MEASUREMENTS.
DATA: DOCUMENTE HAYPOTNITHY OF ATA.
     DATE+ENTERFU: 11162.
     DESCRIPTION: "PORTH/SQUITE DISTANCE".
     ENTEREDORY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED THE
          FILE: F+06+FLIGHT+PROFILE+FILE.
     TRACED FROM:
          OPIGINATING+REWHIREMENT:
          CRIGGREDGENERATE OF ATFORMAMENSUREMENTS.
DATA: DAN434FLIGHT+WAYPOTHT+Z4PATA.
     DATE + ENTERFO: 11187.
     DESCRIPTION: "FLEVATION".
     TYPE: PEAL.
     UNITS: METERS.
     USF: BOTH,
     CONTAINED IN:
          FILE: FERNOFFI INHTERMEFILE FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT:
          URIGHRENHGENEPATEHPLATFORMANE ASHIPF MENTS.
DATA: DendueFREUUEMCYESCANEPAHAMETEREDATA.
     DATE+EMTFREG: 91561.
     DESCRIPTION: "SCANING PAPAMETER FOR & FREGHE"CY".
     ENTEREC+BY: "D HARTSCHUHT.
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: FARA-SENSOR-STATUS-FILE.
     THACED FROME
          ORIGINATING+REQUIREMENT: UPIGHREUSSNKHAGTTVITY+FLEMENTS
DATA: DAGGS+GPS+IU+OATA.
     RANGE: "GPS+1+16LS,GPS+2+1FLS,GPS+3+FELS".
     TYPE: FNIMERATION .
     HSF: GOTH.
     MAKES:
          MESSAGE: N+05+1FL3+1CN+SHRVETLLANCE+TAPGFT+RFPNRTS+MSG+UHT
          MESSAGE: MEGGENELSERFINESTEDESENSURERATAEMSGEIN
          MFSSAGE:
                    - MELPENEL SESURVETLLANCEETARGETEREPORTSEMSGEDUT.
     INPUT TO:
          ALPHA:
                  A+16+bel Septencesserenuestededata+Alpha.
     DUTPH! FFOY:
                  A+20+NELS+SHRVFILLANCF+AND+TRACK+MSGS+ALFH4.
          ALPHAL
```

```
DATA: D+046+GROUND+TARGET+FREQUENCY+DATA.
    DATE+ENTERED: 11187.
    DESCRIPTION:
             "(NELS, WELS ONLY) FREQUENCY OF EMISSION OF GROUND
   TARGET".
     FNTERED+RY: "JJF-NELS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: BOTH.
     MAKES:
          MESSAGE: ME05ENELSENDINESURVEILLANCEETARGETERFORTSEMSGEDDT
          MESSAGE: M+12+NELS+SLRVEILLANCE+TARGFT+REPORTS+MSG+DUT.
     DUTPUT FROM:
          ALPHA: A+20+NELS+SURVEILLANCF+AND+TRACK+45GS+ALPHA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: OPIG+PEO+NELS+EXTERNAL+INTERFACE.
DATA: 0+047+GROUND+TARGET+LENGTH+DATA.
     DATE+ENTERED: 11182.
     CESCRIPTION: "IIS ONLY! LINEAR EXTENT OF GROUND TARGET".
     FNTEREDORY: "JJF-NFLS".
     TYPE: REAL.
     UNITS: METERS.
     USF: BOTH.
     MAKESI
          MESSAGE: MEOSEMELSENCHESURVETLLANCEETARGETERFPORTSEMSGEOUT
          MESSAGE: Me12+MELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT.
     CUTPUT FEOM:
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACY+MSGS+ALPHA.
     TRACED FROM:
          ORIGINATING HREQUIPERENT: ORIGHREQUELS SEXTERNAL STATERFACE.
DATA: DEGAREGROUNDETARGETELUCEXEDATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "X COORDINATE OF GROUND TARGET".
     FUTEREDORY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+07+GROHF+TAMGET+LOCS+FILE.
     TRACED FROME
          ORIGINATINGERFUNIREMENT: ORIGEREGENEL SEEXTERNAL EINTERFACE.
DATA: De049+GROU"D+TARGET+1 OC+++DATA.
     DATE+EMTFRED: 11182.
     DESCRIPTION: MY COORDINATE OF GROUND TARGETM.
     ENTERED+RY: "JJF-NFLS".
     TYPE: FEAL.
     USF: onth.
     CONTAINED IN:
          FILE: FOOT+GRUND+TARGET+LOCS+FILE.
     THACED FROM:
          UPIGINATINGEREGHIREMENT: URIGEREGENELSEEXTERNALEINTERFACE.
DATA: 0+050+GKOUND+ TARGET+VELOCITY+DATA.
     DATE+ENTERFL: 11182.
     DESCRIPTION: "[MTI ONLY] VELOCITY OF GROUND TARGET".
```

```
ENTEREDORY: "JJF-WFLS".
    TYPE: REAL.
    HNITS: KPH.
    USF: BOTH.
    MAKES!
          MESSAGE1 M+05+NELS+NCN+SURVETLLANCF+TARGFT+REPORTS+M8G+0UT
          MESSAGE: 4+12+4ELS+SLRVETLLANCE+TARGET+REPORTS+MSG+DUT.
    DUTPHI FROM:
          ALPHA: A+20+NEES+SURVEILLANCE+AND+TRACX+4565+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQHNELS+EXTERMAL+INTERFACE.
DATA: D+051+HYPSD+FLEV+DATA.
     TYPE: REAL.
     USE: HOTH.
     CONTAINED IN:
          FILE: F+996HYPSO+DATA+FILE.
DATA: D+052+HYPS"+1 UC+Y+DATA.
     TYPE: REAL.
     HISE: BOTH.
     CONTAINED IN:
          FILE: F+OB+HYPSU+DATA+FILE.
DATA: D+0534HYPSH+LOC4Y+DATA.
     TYPE: PEAL.
     HISF: BOTH.
     CONTAINED INT
          FILE: FEOREMYPRUFUATAFFILE.
DATA: D+054+MA95HALLING+Y+DATA.
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: FOROMANSHALLING+AREASOFILE.
DATA: DEMOSTANAPSHALLINGEYEDATA.
     TYPE: PEAL.
     USF: SOTH.
     CONTAINED IN:
          FILE: FENGEMANSHALLINGEADEASEFILE.
DATA: D+056+NEEDED+FEASIBLE+DATA.
     DATE+ENTERED: 100581.
     RESCRIPTION: "INFORMATION CONCERNING A FEASIBLE TARGET".
     ENTEPEDARY: "D HARTSCHUH".
     PANGE: "SOT, AUT, ROTH".
     TYPE: FNUMERATTON.
     USF: BOTH.
     MAHESI
          MESSAGET MED4+MELS+MODIFTED+TASK+MSG+IV
          MESSAGE: N+UB+MELS+PFIGHTTIZFU+SENSUP+PIRECTIONS+MSG+IN.
     INPUT TO:
           ALPHA: A+11+NEI S+MOUTFY+TASK+ALPHA
           ALPHA:
           A+15+MELS+PROCESS+PPICRITIZED+SENSOR+DIPERTIONS+ALPHA.
     TRACED FROME
           OFCISION: CUNTENTS+OF+MESSAGE.
```

```
DATAL DAOSAENFLSHODELEZEDATA.
    DATE+ENTERED: 11282.
     DESCRIPTION:
     "DIFFERENTIAL COPPLED BETAFEN WELS PLATFORMS 1 AND 2".
     ENTEREPHRY: "JJF-NELS".
     TYPE: PEAL.
    USF: BOTH.
     INCLUDED IN:
         DATA: D+112+NELS+TF04+DD+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: ORIGHREQ+MELS+TANGET+ACQUISITION.
DATA: DE059+NELS+DD+1+3+DATA.
    DATE-ENTERED: 11202.
     DESCRIPTION:
     "DIFFERENTIAL DUPPLER RETWEEN NELS PLATFORMS 1 AND 3".
     FNTERED+RY: "JJF-NFLS".
     TYPE: PEAL.
    HSF: BOTH.
     INCLUDED IN:
          DATA: D+112+NELS+TDQA+DD+DATA.
     THACEU FROM:
          ORIGINATING + REGUIREMENT: URICHPEN+NELS+TAHGET+ACQUISITION.
DATA: D+C+0+NELS+DD+2+3+DATA.
    DATE+ENTERED: 11282.
     PESCPIPTION:
     "DIFFEPENTIAL POPPLER BETWEEN NELS PLATFORMS 2 AND 3".
     FNTERED+RY: "JJF-NELS".
     TYPE: PE'L.
     USF: P IH.
     INCLUDED IN:
          DATA: D+112+NELS+TDOA+DD+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+TARGET+ACQUISITION.
DATA: N+061+NELS+EMISSION+DURATION+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             TTIME THAT EMITTER IS EMITTING AND BEING LISTENED TO
   BY NELS".
    FATEREDORY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED TN:
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+RENNIREMENT: UPIG+RED+NELS+ADI.
DATA: P+062+MELS+EMISSIUN+SIGNAL+STRENGTH+DATA.
     DATE+ENTEREU: 11162.
     DESCRIPTION:
             "SZN STRENGTH OF SIGNAL FOR A SINGLE SENSOR: STRENGTH
  DATA FROM AT LEAST TWO SENSORS IS REQUIRED REFORE A DETECTION CAN
  BE CONFIRMED".
     FNTEPEP+RY: "JJF+NELS".
     TYPE: PEAL.
```

USF: BOTH. CONTAINED IN: FILE: F+10+NFLS+CANDIDATF+TARGETS+FILE. TRACED FROM: ORIGINATING+REGUIREMENT: ORIGHREG+NELS+ADI. DATA: De063+4+NELS+EMISSION+START+TIME+DATA. DATE+ENTFRED: 30283. DESCRIPTION: " TIME FMISSION STARTS (INITIALIZED DATA)". FNTERED+BY: "JOURBS". TYPE: REAL. UNITS: HRS+MIN+SEC. USF: BOTH. INCLUDED IN: DATA: D+071+NELS+EMITTER+DATA. TRACED FROM: URIGINATING + REQUIREMENT: OPIG+REQ+SCENARIO+TIMING. DATA: D+063+R+NELS+EMISSION+START+TIME+DATA. DATE+ENTERED: 30283. DESCRIPTION: " TIME EMISSION STARTS (BEFORE SOT)". FATEREN+RY: "JOURBS". TYPE: HEAL. UNITS: HPS+MIN+SEC. USF: BOTH. INCLUDED IN: DATA: D+06A+NELS+EMITTER+ACTIVITY+GROUND+TPUTH+DATA. TRACED FROM: ORIGINATING+REQUIPEMENT: ORIGHPER+SCENARIO+TIMING. DATA: DAROSTANELS+EMISSION+START+TIME+DATA. DATE+ENTERED: 102781. DESCRIPTION: "TIME EMISSION STARTS". FNTERENORY: "JJF-ES". TYPE: PEAL. UNITS: HPS+MIN+SEC. USF: BOTH. CONTAINED INT FILE: F+10+NELS+CAMDIDATE+TARGETS+FILE. THACED FRUM: OPIGINATING+REUNITEMENT: OPIG+PEG+SCENARIO+TIMING. DATA: DANGUARANEL SAEMISSTONASTOPATIME +DATA. DATE+ENTERED: 30283. DESCRIPTION: "TIME EMISSION STOPS (INITIALIZED DATA)". FNTERED+RY: "JOURBS". TYPE: REAL. HATTS: HRS+MIN+SEC. HSF: HOTH. THELUDED IN: DATA: D+071+VELS+EMITTEH+UATA. TRACED FROM: URIGINATING CHEQUIPENENT: UPIGCPECCSCENARIGCTIMING. DATA: PAREMETELS+E"ISSION+STOP+TIME+DATA. PATERENTEPED: 102781. DESCRIPTION: "TIME EMISSION STOPS (HEFORE SOT)". FNTEREDORY: "JJF-ES".

```
TYPE: PEAL.
     HATTS: HES+MIN+SEC.
     USF: BOTH.
     INCLUDED IN:
          DATA: PEROSENEL SEEMITTERFACTIVITY FOR OUND + TRUTHEDATA.
     TRACED FRUM:
          ORIGINATINGEREUNIRE'E'T: UPIGERERESCENARIOETIMING.
DATAL DEGOSENELSERMISSIONETHPEATETABLE EDATA.
     DATE+ENTERFO: 11282.
     DESCRIPTION: "A PECORU DESCRIBTING & SIMBLE EMITTER".
     FNTEREC+RY: "JJF-1.FLS".
     INCLUDES:
          DATAL
                -PIGO 19GNEL SCEMITTERCTIMECRECLOCATION CONTA
                LATA:
                DETTIENEL SELMITTEREIL COATA
          DATA:
          DATA:
                - 14172+NELS+EMITTEH+TRANSMISSION+FREWHENCY+DATA
          DATA: PHITSONE, SEEMITTEREXELATA
          DATA: "+174+HEL SEEMITTEREY-WATE
          DATA: "+175+NEI S+E"ITTER+2+DATA
          DATA: BETWIENEL SEEM ITTERE MODILLATTONETYPE + DATA
          USTA: DETERPOSE SEEMITTER CHANDWINTHEDATA
          DATA: D+183+PELS+EMITTER+CEF+DATA.
     CONTAINED INT
          FILE: FEISENELSEENISSIONETHKEATETABLEEFILE.
     TRACEU FRUN:
          ORIGINATING + REQUIPEMENT: URIGHRECHNELS + THREAT + TAHLE + HEDDATE
DATA: OFFICE SEEVITTERGACTIVITY FROUND FIRE THE DATA.
     MATERENTERES: 30283.
     DESCRIPTION:
     "A STAGLE RECOPU OF MELS SCENARIO FIEL (MEROPE SOI)".
     ENTEREDORY: "JOURNS".
     INCLUDES:
          DATA: DECOSEREMELSEEMISSIONESTARTETIMEEDATA
          UPTA: PARAMETSAETISSIONASTOPATTAFADATA
          DATA: DEATTERS ELSEEMITTERS FOR OUT NO YERANDATOTHED ATA
          DATA: Den75-Benel, Ster ITTER+ DATA
                PERSTANDED SEEMITTERFIRM SKISSTOMEFFECHENCYEDATA
          UATA:
          DATA: DECERNITE SEEMITTER EVEL EXHDATA
          DATA: MEDBRENET SEEMITTERAVELAYEDATA
          UATA: "HORSENEL SEE MITTEHEVELEZEDATA
          DATA:
                 PERSONAL PROPERTY OF THE SECONDARY
          DATA:
                - 040864844615464177584440874
          DATA:
                PHOOTONOMEN SHEMITTERAZADATA
          : 4740
                Delsnepescenarideceneloenumenata.
     INT GAMIATHUD
          FILE: F+14+NFLS+FMITTED+ACTIVITY+GROUND+THUTH+FILE.
     TRACED FROM:
          UPIGINATING CHENNIPEMENT: ORICCHERCHNELS CENTERNAL CINTERFACE.
DATA: D+067+NELS+EMITTER+6ANDWIDTH+OATA.
     DATE+ENIERED: 11182.
     DESCRIPTION: "RANDWINTH OF EVISSION(S) EMITTER EMITS".
     ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
     UNITS: HERTZ.
```

```
USE: BOTH.
     INCLUDED IN:
          DATA: Den69-NELS-EMITTER-CHARACTERISTICS-DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+06A+NELS+EMITTER+CEP+DATA.
     DATE+ENTERFU: 11282.
     DESCRIPTION:
             "CIRCULAR ERPOR PROBABLE ESTIMATE FOR A NELS
   DETECTABLE EMITTER".
     FNTERED+PY: "JJF-NFLS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+089+NELS+ESTIMATED+GROUND+TRUTH+DATA.
     TRACEU FRUM:
          URIGINATING+REQUIREMENT: UPIG+REG+NELS+THREAT+TABLE+HPDATE
DATAL DANGGENELS-EMITTER-CHARACTERISTICS-DATA.
     PATE+ENTEREU: 11182.
     DESCRIPTION:
             MA SINGLE RECORD OF EMITTER+10 AND EMITTER
   CHARACTERISTICS".
     PATEREDONY: "JJF-NFLS".
     INCLUDES:
          DATA:
                 D+007+ "ELS+EMITTER+BANDKIDTH+DATA
          OATA:
                - N+077+4+NELS+EMITTER+NODULATION+TYPE+CATA
          DATA: D+078+A+NELS+EMITTER+POWER+LEVEL+DATA.
     CONTAINED IN:
          FILE: F+15+HFLS+FMITTEP+CHAMACTERISTICS+FILE.
     TRACED FROM:
          ORIGINATING+REGUIPEMENT: URIC+PEO+NEUS+EXTERMAL+TNTERFACE.
DATA: De070+MELS+EMITTER+COV+DATA,
     DATE+ENTERED: 11282.
     DESCRIPTION: "COVARIANCE PETHEEN & AND Y LOCATION ESTIMATES".
     ENTEREC+PY: "JJF-NELS".
     TYPE: REAL.
     HSF: BOTH.
     INCLUDED IN:
          DATA: DefiseNELSeTYPEDEEMITTEREREPORTEDATA.
     TRACED FROM:
          OPIGINATING + REWHIPE MENT:
          ORIGOREDONEL SOCOARSEONNOOFINEOLOCATION.
DATA: D+071+HELS+EMITTER+UATA.
     PATE +ENTEREDE 30283.
     DESCRIPTION: "FECORD OF YELS EMITTER FILE ( INITIALIZED)".
     ENTERED+AY: "JOUBES".
     THELIDES!
          DATAS
                -D+063+4+PELS+EMISSIUN+START+TIME+DATA
                 Dennue A - A ELS - E * ISSION + STOP+ TIME + DATA
          DATAL
          DATAL
                 DODZZEACKEL SCENITTERCEPERUF NO YOBANDWIDTHCDATA
                 MANISHAANEL SAEHITTERAINANATA
          CATAL
                 Denbleachelsemitter-transmissionefrequency-data
          DATAL
          DATAL
                D+082+A+MELS+EMITTEH+VFL+X+DATA
```

```
DATA: D+083+A+NELS+EMITTFR+VFL+Y+DATA
          DATA: D+064+A+NELS+EMITTER+VEL+Z+CATA
          DATA: D+085+A+NELS+EMITTER+X+DATA
          DATAL
                DEOB6+A+NELS+EMITTER+Y+DATA
          DATAL
                D+087+A+HELS+EMITTER+Z+DATA
          DATAS
                D+130+4+SCFNAHID+GEN+ID+NUM+DATA.
     CONTAINED IN:
          FILE: F+16+NELS+EMITTER+FILE.
     THACED FROMS
          ORIGINATING + REQUIREMENT: URIG+REG+SCFNARIC+TIMING.
DATA: D+072+NELS+EMITTER+DYNAMICS+DATA.
     DATE+ENTERED: 102/81.
     DESCRIPTION: "30 VELOCITY VECTOR OF EMITTER".
     ENTEREDORY: "JJF-ES".
     JICLHOFS:
          DATA: P+082+NELS+E"ITTER+VFL+X+DATA
          DATA: DENBACHEL SEEMITTEREVELEYEDATA
          DATA: C+084+NELS+EMITTER+VFL+Z+DATA.
     TRACEU FROM:
          ORIGINATING+REUNIPERENT: URIGHPER+PPODUCE+SCENAHIO.
DATA: P+0/3+4+NELS+EMITTFR+FREGUFNCY+BANDWIDTH+DATA.
     DATE+ENTERED: 30283.
     PESCRIPTION:
     "BANGHIOTH OF AGROWRAND EMISSION (INITIALIZED DATA)".
     FATERED+RY: "JOURNS".
     TYPE: FEAL.
    UNITE: HERTZ.
    TISE: BOTH.
     INCLINED IN:
          DATA: DENTITE SEL "ITTEREDATA.
     THACEU FROM:
          ORIGINATIO GERENHIREMENT: ORIGEREGERHOUDCEESCENARTO.
DATA: P+0/3+4+NELS+EMITTER+FPECHENCY+HANDHIDTH+DATA.
     DATE + ENTERED : 30243.
     DESCRIPTION: "RANDWINTH OF JAKROWSAND FMISSION (REFORE SOIT".
     FATERENGRY: "JOURNS".
     TYPE: PEAL.
     UNITS: HEHTZ.
     USF: UNTH.
     INCLUDED IN:
          DATA: P+066+4E15+E41TTFR+ACTIVITY+GROUND+TRUTH+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREG+PRODUCF+SCENARIO.
DATAL DE073+NELS+EMITTER+P9EQUENCY+BANOWIDTH+DATA.
     DATE -ENTERED: 102741.
     DESCRIPTION: "MAND VIDTH OF VARROVEAND EMISSION".
     ENTEPED+BY: "JJF-ES".
     TYPE: PLAL.
     UNITS: HERTZ.
     USF: HOTH.
     CONTAINED INE
          FILE: F+10+NFLS+CAMDIDATE+TARGETS+FILE.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: ORIGERED+PRODUCF+SCENARIO.
```

```
DATA: PANTUANELSAEMITTERAFREDUENCYAUATA.
     DATE+ENTERED: 31062.
     DESCRIPTION: "FPFQUENCY OF EMISSION OF NELS-DETECTABLE EMITTER".
     ENTEREDERY: "JJF-NELS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: P+113+NELS+TYPEN+EMITTER+REPORT+DATA.
DATA: De075+4+HELS+EMITTER+ID+PATA.
     DATE - ENTERED: 30283.
     DESCRIPTION: "IDENTIFIER OF EMITTER (INITIALIZED DATA)".
     FNTERED+RY: "JOURGS".
     RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUR, MISSILE, UNKNOWN".
     TYPE: ENUMERATION.
     HSE: BOTH.
     INCLUDED IN:
          UATA: G+071+HELS+EMITTER+DATA.
     TRACED FROM:
          ORIGINATING + REUDIREMENT: ORIGHPER+ PRODUCT+ SCENARIO.
DATA: D+075+R+NELS+EMITTER+IC+CATA.
     PATE+ENTERED: 30283.
     DESCRIPTION: "IDENTIFIER OF EMITTER (BEFORE SOI)".
     ENTEREDOPY: "JOURBS".
     PANGE: "RADIO, TANK, TPUCK, PLAME, SHIP, SUP, MISSILE, UNKNOWN".
     TYPE: ENUMERATION.
     HSF: BOTH,
     ORDEPS:
          FILE: F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     INCLUDED IN:
          DATA: D+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+075+NELS+EMITTER+ID+DATA.
     DATE + ENTERED: 102781.
     DESCRIPTION: "IDENTIFICATION OF EMITTER".
     FNTEPED+RY: "JJF=ES".
     RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUB, MISSILE, UNKNOWN".
     TYPE: ENUMERATION.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+10+NELS+C4NDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REGHIREMENT: OPIG+RER+PRODUCF+SCENARIO.
DATA: DATA: DATA-NELS-EMITTER-LOCATION-DATA.
     DATE+ENTERED: 102741.
     DESCRIPTION: "POSITION OF NELS-DETECTABLE EMITTER".
     ENTEPER+BY: "JJF-ES".
     INCLUDES:
                  D+085+NELS+EMITTER+X+DATA
           DATA: D+085+NELS+EMITTER+Y+DATA
           DATA: 0+087+NELS+EMITTER+2+DATA.
     CONTAINED INS
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```
FILE: F+10+NFLS+CANDIDATE+TARGETS+FILE.
     TRACED FROY:
          ORIGINATING+REQUIREMENT: ORIGHREQ+PRODUCE+SCENARIO.
DATA: D+077+A+NELS+EMITTER+MODULATION+TYPE+DATA.
     CATE+ENTERED: 30783.
     DESCRIPTION:
     *TYPE OF MODULATION EXHIBITED BY EMITTER (REFORE SOI) .
     FNTERED+RY: "JOURBS".
     PANGE: "MODULATED, NOT+MODULATED".
     TYPE: FNUMERATION.
     HSF: BOTH.
     INCLUDED IN:
          DATA: D+069+WEI S+EMITTER+CHARACTERISTICS+DATA.
     TRACED FROM:
          ORIGINATING CRECOURSEMENT: ORIGOPER CHELSCEXTERNAL CINTERFACE.
DATA: D+077+NELS+EMITTER+MODULATION+TYPE+DATA.
     FATE+ENTERFO: 11182.
     CESCHIPTION: "TYPE OF MODULATION EXHIBITED BY EMITTER".
     FATEREDARY: "JUF-NELS".
     PANGE: "MODULATED, NOTEMODULATED".
     TYPE: ENUMERATION.
     ESF: BOTH.
     THELPHED IN:
          DATA: De0886NEL SEESTIMATEDEEMITTEREPARAMETERSEDATA.
     THACEU FROM:
          URIGINATI GEREQUIPEMENT: OPIGEREQUNELSEEXTERNAL TINTERFACE.
DATA: DANTREASHIEL SAEMITTERAPORERALE VELADATA.
     DATE+ENTERFU: 30783.
     RESCRIPTION: "PUNER LEVEL OF EMITTER (PEROPE SOI)".
     FITELEDARY: "JDUSES".
     TYPE: PEAL.
     PRITTS: MATES.
     USF: BOTH.
     THELINDED IN:
          DATA: CHOB9+NELSHEHITTER+CHARACTERTSTICS+DATA.
     THACED FROM:
          OPICINATINGENERAL OPICERECENELS EXTERNAL TINTERFACE.
DATA: DANTRAMELS+EMITTERAPONERALEVELADATA.
     CATE+ENTERED: 11162.
     DESCRIPTION: "POWER LEVEL OF EMITTER".
     FNTERED+PY: "JJF-WFLS".
     TYPE: REAL.
     UNITS: WATTS.
     USF: BOTA.
     INCLUDED THE
          DATA: DECARAMEL SEESTIMATED + EMITTER + PARAMETERS + PATA.
     TRACED FROM:
          OPICINATING+REGUIPEMENT: OPIC+PEC+NELS+EXTERNAL+INTERFACE.
DATA: Den79+16LS+64ITTFR+TIMF+CF+LOCATION+DATA.
     PATE + E' TEREU: 11242.
     RESCRIPTION: "TIME AT WHICH THE EMITTER WAS LOCATED".
     FINTEREPHRY: "JUFHNELS".
     TYPE: WEAL.
```

```
USE: BOTH.
     ORDEPS:
          FILE: F+13+NELS+FMISSION+THREAT+TABLE+FILE.
     INCLUDED IN:
          DATA: DenoseREL SEEMISSTONETHREATETABLE +DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REG+NELS+THREAT+TABLE+UPDATE
DATA: NOOBOONELSTEMITTERATPAFFICATYPEADATA.
     CATE+ENTERED: 11282.
     DESCRIPTION: "TRAFFIR TYPE COOF FOR A MELS EMITTER".
     FNTERED+BY: "JJF-NFLS".
     PANGE: "PASSIVE, PUTENTIAL &THPEAT, THREAT".
     TYPE: FAUHERATTON.
     USF: BOTH.
     INCLUDED IN:
          UATA: DECOSENEI SEEMISSTOMETHREATETABLEEDATA.
     THACED FE JA:
          URISINATINGEREUNIBEMENT: URICERFOENELSETHKFATETARLEENPOATE
DATA: Decolear Welsermitter transmission frequency forta.
     DATE+ENTERED: 30283.
     DESCRIPTION:
     " TRANSMISSION FREQUENCY OF EMITTER (IDITIALIZED DATA)".
     ENTERECHAY: "UDJABS",
     TYPE: REAL.
     UNITS: HEXTZ.
     USF: 30TH.
     INCLHOFO IN:
          DATA: POOTIONEL SEEMITTER OUNTA.
     TRACED FROM:
          ORIGINATIA GEREGUIREMENT: ONIGEREGERADOUCFESCENARTO.
DATA: NOOMICHONELSCHMITTERCTEANSMISSIONEFREDURMCYCNATA.
     DATE + ENTERFIT 30283.
     DESCRIPTION: " TRANSHISSION FREUMENCY OF EMITTER (REFORE SOI)".
     FHTEREC+BY: "JOURNS".
     TYPE: REAL.
     UNITS: HERTZ.
     DSF: BOTH.
     INCLUDED IN:
          DATA: Denofecial Servittereactivityechnushetruthedata.
     TRACED FROM:
          ORIGINATING+HEURINE"EST: ORIGHNEUHPRODUCF+SCFNAKIU.
DATA: P+051+NELS+EMITTER+TPAPSYISSTON+FAFORENCY+DATA.
     DATE + ENTENEL: 102791.
     DESCRIPTION: "THANSMISSION ERFOLDENCY OF PHITTER".
     ENTEPED+RY: "JJF-ES".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: BOTH.
     CONTAINED INT
          FILE: F+10+NELS+CALDIDATE+TAPGETS+FILE.
     TRACED FRUM:
          OPIGINATING+REUNIPEMENT: UPIG+PEC+PEODUCF+RCFNARTO.
```

```
DATA: D+082+4+1ELS+EMITTFR+VFL+X+DATA.
     PATE+ENTERED: 20283.
     DESCRIPTION:
     "EAST/WEST COMPONENT OF VELOCITY (INITIALIZED DATA)".
     ENTERED+3Y: "UDUPds".
     TYPE: REAL.
     UNITS: KPH.
     HSE: BOTH.
     INCLUDED IN:
          DATA: DOOTIONEL SEEMLITERODATA.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: OPIG+PEG+PRODUCF+SCFNARIO.
DATA: D+082+NELS+EMITTER+VFL+x+DATA.
     DATE+ENTERFO: 102781.
     DESCRIPTION: "FAST/WEST COMPONENT OF VELOCITY (EFFORE SUI)".
     FNTEPED+RY: "JJF-ES".
     TYPE: REAL.
     UNITS: KPH.
     USF: BOTH.
     INCLUOFO IN:
          DATA: DAROBENEL SEEMITTEREACTIVITYERROUNDETPUTHEDATA
          DATA: D+072+NELS+EMITTER+DYNAMICS+DATA.
     TRACED EPOM:
          OPIGINATING*REQUIREMETT: UPIC+PER+PROUNCF+SCFNARIO.
DATAL NEOBBERGENELSEMITTEREVELAYEDATA.
     PATEALNTERED: 20285.
     DESCRIPTION:
     "UNRTHISOUTH COMPUNENT OF VELOCITY (INTITALIZED DATA)".
     FHTERER + HY: "JOUHHS".
     TYPE: PEAL.
     UNITS: KPA.
     HISE: BOTH.
     INCLUDED IN:
          DATA: DEOTIENEL SEEMITTEREDATA.
     THACED FROME
          URIGINATING - REDWIFE "ENT: URIGERED - PRODUCE - SCENARIO.
DATA: D+083+NELS+EMITTER+VFL+Y+DATA.
     DATE - ENTERFO! 102781.
     DESCRIPTION: "NURTH/SUNTH COMPONENT OF VELOCITY (BEFORE SOI)".
     FATEPER+RY: "JJF-ES".
     TYPE: PEAL.
     UNITS: KPH,
     USF: BOTH.
     INCLUDED IT:
          DATAL DEGAGENEL SEEF ITTEREACTIVITYEGROUNDETRUTHEDATA
          DATA:
                - FAMIZALE! SAE"ITTENADYNAMICSAMATA.
     TRACED FUOM:
          UPISIMATING+HEQUIREMENT: UPIG+REC+PRODMCF+SCFWARTO.
DATA: D+084+A+NELS+EMITTFH+VFL+Z+DATA,
     CATEGENTERED: 20263.
     DESCRIPTION: "PPZDOAN COMPONENT OF VELOCITY CINITIALIZED DATA)".
     ENTEREDOBY: "JOUPES".
     TYPE: PEAL.
```

```
UNITS: KPH.
     USE: BOTH.
     INCLUDED IN:
          DATA: De071+NELS+EMITTER+DATA.
     TRACED FROM:
          ORIGINATING+REGUIRENERT: ORIG+PER+PRODUCF+SCENARIO.
DATA: D+084+NELS+EMITTER+VEL+Z+DATA.
     DATE+ENTFRED: 192781.
     DESCRIPTION: "UP/DOWN COMPONENT OF VELOCITY (BEFORE SGT)".
     ENTEPED+RY: "JJF-ES".
     TYPE: PEAL.
     UNITS: MPS.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+066+MELS+EMITTER+ACTIVITY+RROUND+TGUTH+DATA
          DATA: D+072+NELS+EMITTEP+DYNAMICS+DATA.
     TRACED FROM:
          ORIGINATING+REGUIRENENT: OPIG+REG+PRODUCF+SCENARTO.
DATA: D+085+A+NELS+EMITTFR+X+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "DISTANCE EAST/WEST (INITIALIZED DATA)".
     ENTERED+BY: "JOURSS".
     TYPE: FEAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IT:
          DATA: D+071+NELS+EPITTER+DATA.
     TRACED FROM:
          OPIGINATING - REDUIRE "ENT: UPIG - REC-PHODUCE - SCENARIO.
DATA: DECUSEFENEL SEEMITTEREXEDATA.
     DATE + ENTERED: 30243.
     DESCRIPTION: "DISTANCE EAST/WEST (REFORE SOIT".
     ENTEREPORY: "JOURSS".
     TYPE: REAL.
     UNITS: K".
     USE: BOTH.
     INCLUDED IN:
          DATA: C+066+MELS+EMITIFE+ACTIVITY+GROUND+TRUTH+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQ+PROUNCF+SCENARIO.
DATA: D+085+NELS+EMITTER+X+DATA.
     PATERENTERED: 1027A1.
     DESCRIPTION: "DISTANCE EAST/ VEST".
     FNTEREC+RY: "JJF-ES".
     TYPE: FEAL.
     UNITS: KP.
     USE: BOTH.
     INCLUDED INT
         DATAL DECTOONELSEE LITTER LOCATION FOATA.
     TRACED FRUM:
          OPIGINATING + REJULE ENT: UPIG+ HED+ PRODUCF+ SCENARIO.
DATAL DEOBAGANELSGEMITTERGYEDATA.
     DATE+ENTERED: 30283.
```

```
DESCRIPTION: "FISTANCE NORTH/SOUTH (THITTALIZED DATA)".
     ENTEREDORY: "JOURNS".
     TYPE: FLAL.
     UNITS: KM.
     USE: BOTH.
     INCLHIDED IN:
          DATA: DECTIONEL SEEMITTER + DATA.
     TRACED FROM:
          ORIGINATING+REWHIPEMENT: ORIG+PER+PRODUCE+SCENARIO.
DATA: D+086+R+NELS+EMITTFR+Y+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "DISTANCE WORTH/SOUTH (REFORE SOI)".
     ENTEREDARY: "JOURBS".
     TYPE: PEAL.
     UNITS: KM.
     115F: 80TH.
     INCLUDED IN:
                 Denon-RELS-EMITTER-ACTIVITY-GROUND-TRUTH-DATA.
          CATA:
     TRACED FROM:
          ORIGINATING+REUHIREMENT: ORIG+RER+PRODUCE+SCENARTO.
DATA: N+086+NELS+EMITTFR+Y+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "DISTANCE NORTH/SOUTH".
     ENTEPENARY: "JJF-ES".
     TYPE: PEAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+076+NELS+EMITTER+LOCATION+DATA.
     TRACEU FROM:
          ORIGINATING+REQUIREMENT: ORIG+RED+PRODUCE+SCENARIO.
DATA: D+087+4+NELS+EMITTER+Z+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "ALTITUDE/ELEVATION (INTITIALIZED DATA)".
     ENTERED+RY: "JOURHS".
     TYPE: PEAL.
     UNITS: METERS.
     USF: BOTH.
     INCLUDED IN:
                 "+071+NELS+EMITTER+DATA.
          SATAS
     TRACED FROM:
          ORIGINATIA GHREGHIREMENT: OPIGHPEGHPRODUCF+SCENARTO.
DATA: 0+087+R+NELS+EMITTER+Z+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "ALTITUDE/ELEVATION (PEFORE SOI)".
     ENTERED+RY: "JDUPBS".
     TYPE: PEAL.
     UNITS: METERS.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+066+NELS+EMITTER+ACTTVITY+GROUND+TRUTH+DATA.
     THACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+RED+PRODUCE+SCENARIO.
```

```
DATA: P+987+NELS+EMITTER+Z+DATA.
    DATE+ENTERED: 102781.
     DESCRIPTION: "ALTITUDE/ELEVATION".
     ENTERED+RY: "JJF-ES".
     TYPE: REAL.
     UNITS: METERS.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+076+NELS+EMITTER+LOCATION+DATA.
     TRACED FROM:
          OPIGINATIA G+REQUIREMENT: ORIG+REG+PRODUCE+SCENARIO.
DATA: D+08P+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION: "PARAMETERS ESTIMATED BY TARGET ACQUISITION".
     ENTERED+RY: "JJF-NELS".
     INCLUDES:
                 D+077+NELS+EMITTER+MODULATION+TYPE+DATA
          CATA:
                 0+078+MELS+EMITTER+POHER+LEVEL+DATA
          DATA:
                 Def SOMMEL SHEMITTER OF BUENCY BANDWIDTHODATA
          DATA:
          DATA: D+161+NELS+EMITTER+TRANSMISSION+FREGUENCY+DATA.
     CONTAINED IN:
          FILE: F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE.
     TRACED FROM:
          ORIGINATING+REGNIPEMENT: ORIG+REG+NELS+TARGET+ACQUISITION.
DATA: D+089+NELS+ESTIMATED+GROUND+TRUTH+DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION:
              WA RECORD OF ESTIMATED GROUND LOCATIONS FOR ONE
   EMITTER".
     FNTEREDORY: "JJF-NELS".
      INCLUDES:
                 - NAMBANEL SAEMITTERACEPADATA
           DATAL
                 0+157+NELS+EMISSION+DURATION+DATA
           1 ATAG
                 De1584NELS4EMISSTON4START4TIME+DATA
           DATA:
                 DA1604MELSEEMITTERAIDADATA
           SATAS
                 Dethalehel Seemitterexedata
           DATA:
                 De163+NELS+EHITTFR+Y+UATA
           SATAS
                 D+164+HELS+EMITTER+Z+DATA
           DATA:
                 D+165+SCENARIO+GEN+ID+NUM+DATA.
           LATAG
      CUNTATNED THE
           FILE: F+18+NFLS+FSTI*ATED+GROUND+TPUTH+FILE.
      TRACED FROM:
           ORIGINATING+REGNIPEMENT: OPIG+RED+NELS+TARGET+ACRUTSITION.
 DATA: DANGO + VELS+FREQUENCY+SCA++RAND+DATA.
      DATE+ENTERED: 11182.
      DESCRIPTION: MA RANGE OF FREQUENCIES TO SCANM.
      FNTERED+BY: "JJF-NELS".
      TACL HOES!
                 THOUSENEL SEFRECESCENEL DARREPPEDEDATA
           DATAL
           DATA: DENGISENELSERFECESCANEUPPEREREREDATA.
      PORTAINED IN:
           FILE: FA194NFLS4FRF SLEMCYASCANAFILE.
      THACED FED":
           ORIGINATING+REUNIREMENT: ORIG+RER+NELS+STGMAL+RF+INTEREST.
```

```
DATA: D+091+NELS+FREQUENCY+SCAN+DATA.
     DATE+ENTERED: 11187.
     DESCRIPTION:
     *FREQUENCY TO WHICH THE MELS SENSORS ARE TO BE THRED*.
     ENTERED+BY: "JJF-NELS".
     TYPE: REAL.
     UNTTS: HERTZ.
     USE: BOTH.
     INPUT TO:
          ALPHA:
                 A+OR+NELS+FREQUENCY+SCAN+OPTIMIZATION+ALPHA
                 A417+NELS+SENSOR+STATUS+ALPHA
          ALPHA:
          ALPHA:
                  A+18+N'ELS+SIGNAL+OF+INTEREST+FILTFK+ALPHA.
     OUTPUT FROM:
          ALPHA: A+OR+NELS+FPERUENCY+SCAN+OPTIMIZATION+ALPHA
          ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA.
     TRACED FROM:
          ORIGINATING+REGHIREMENT: ORIG+REQ+NELS+SFNSOP+DIRECTOR.
DATA: D+092+NELS+FRED+SCAN+LOWFR+FRED+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "LOWER FREQUENCY OF A SINGLE FREQUENCY RAND".
     ENTERED+RY: "JJF-NELS".
     TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: Dengoenel Sefreguency-ScaneRand+DATA.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: ORIG+REG+NELS+SIGMAL+OF+INTEREST.
DATA: D+093+NELS+FPER+SCAN+UPPER+FRED+PATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: MUPPER FREQUENCY OF A SINGLE FREQUENCY BAND".
     ENTERED+BY: "JJF-NELS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: De090+NELS+FREGUENCY+SCAN+RAND+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REQ+NELS+STGNAL+OF+INTEREST.
DATA: D+G94+NELS+PRE+8PIFFEO+ACI+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "NELS FILTEPING CRITERIA FOR EACH SEAPCH AREA".
     ENTERED+BY: "JJF-NELS".
     INCLUDES:
                Dengs-NEUS-PRE-BRIEFFD-ADI-FTLTERING-CRITERIA-DATA
          DATAS
          DATA: D+096+NELS+PRE+6PIEFFD+A0I+LONFR+LFFT+DATA
          DATA: De099+NELSEPPE+BRIEFFD+ANI+UPPFR+RTGHT+DATA
     CONTAINED INT
          FILE: F+20+NELS+PRE+PRIEFED+401+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+AMI.
DATA: D+095+NELS+PPE+BRIFFFO+ACI+FILTERING+CRITEPIA+DATA.
     DATE+ENTERED: 11182.
```

PESCRIPTION:

```
*FILTEPING CPITERIA FOR A SPECIFIC GEOGRAPHIC
   SEARCH APEA".
     ENTERED+RY: "JJF-NFLS".
     PANGE: "WITHIN+AREA, WITHOUT+AREA".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
         DATA: Denguenelsepreedrieffdeaniedata.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+ADI.
DATA: 0+096+NELS+PRE+BPIFFED+AGI+LOWER+LFFT+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
     "LOWER LEFT COORDINATES OF A GEOGRAPHIC SEARCH AREA".
     FNTERED+RY: "JJF-NELS".
     INCLUDES:
          DATAL
                D+097+NELS+PPE+BPIEFFD+A0I+LOWFR+LEFT+X+DATA
          DATA:
                Dengathelsepreampiefedeacielowerelepteyedata.
     INCLUDED IN:
          DATA: Denguevelseppeebplefedeadledata.
     TRACED FROM:
          ORIGINATING + REGINIREMENT: ORIG+REG+NELS+ADI.
DATA: 0+097+NELS+PPE+BRIFFED+ACI+LOWER+LEFT+X+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             *X COORDINATE OF LOWER LEFT CORNER OF A GEOGRAPHIC
   SEARCH AREA".
     ENTEREC+RY: "JJF-NELS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+096+NELS+PPE+BRIEFED+ADI+LOWER+LEFT+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.
DATA: D+098+NELS+PPE+BRIFFED+ACI+LOHER+LEFT+Y+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             MY COUPDINATE OF LOWER LEFT CORNER OF A GEOGRAPHIC
   SEARCH AREA".
     ENTEPER+BY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+196+NELS+PRE+BRIEFED+ADI+LOWER+LEFT+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REQ+NELS+AOI.
DATA: D+099+NELS+PRE+BRIEFED+ACI+UPPER+RIGHT+DATA.
    PATE+ENTERED: 11187.
     DESCRIPTION:
             "COORDINATES OF UPPER RIGHT COPNER OF A GEOGRAPHICAL
   SEARCH AREA".
    ENTEPEDORY: "JJF-NELS".
     INCLUDEST
          DATA: Delon-WELS-PRE-BRIEFED-ADI-UPPER-RIGHT-X-DATA
```

```
DATA: D+101+NELS+PRE+BRIFFED+ADI+UPPFR+RIGHT+Y+DATA.
    INCLUDED IN:
                D+094+NELS+PRE+BRIEFED+ADI+DATA.
         DATA:
     TRACED FRUM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.
DATA: D+100+NELS+PRE+BPIFFEO+ACI+UPPER+RIGHT+X+DATA.
    DATE+ENTERED: 11182.
    DESCRIPTION:
             MX COORDINATE OF UPPER RIGHT CORNER OF A GEOGRAPHIC
  SEARCH AREA".
    FNTERED+BY: "JJF-NELS".
     TYPE: PEAL.
    USE: BOTH.
     INCLUDED I'I:
          DATA: D+C99+NELS+PRE+BRIEFED+40I+UPPER+RTGHT+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: OPIG+REQ+NELS+ADI.
DATA: N+101+NELS+PPE+HPIFFFD+ACI+UPPER+RIGHT+Y+DATA.
     DATE+ENTERED: 11132.
     DESCRIPTION:
             MX COORDINATE OF UPPER RIGHT CORNER OF A GEOGRAPHIC
   SEARCH AREA".
     ENTERED+RY: "JJF-NELS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+099+NELS+PPE+BPIFFED+API+UPPFR+RIGHT+UATA.
     TRACED FROM:
          DRIGINATING+REGNIPEMENT: UPIG+PED+NELS+ADI.
DATA: D+102+NELS+PRE+BRIFFFD+SCI+DATA.
     DATE+ENTERED: 11187.
     DESCRIPTION: "A RECORD OF FREQUENCY PANGES OF INTEREST".
     ENTERED-BY: "JJF-NELS".
     INCLUDES:
                 D+103+NELS+PPE+BRIEFED+SOI+END+FRED+FATA
          DATA:
                 D+104+NELS+PRE+BRIEFED+SOI+FRED+DATA
          DATA:
                 D+105+MELS+PFE+89IFFEC+SDI+HODULATTON+TYPE+DATA
          DATA:
          DATA: 0+106+ SELS+PRE+HPIEFED+SOI+START+FPEG+DATA.
     CONTAINED IN:
          FILE: F+21+NFLS+PRF+PHTEFED+SUT+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHRED+NELS+SIGNAL+OF+INTERFST.
DATA: DA103+NELS+PPE+8PIFFE0+SCI4EMD+FREQ+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "END PREGUENCY OF A FREQUENCY BAND".
     ENTEPEDORY: "JIF-NELS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: BOTH.
     INCLUDED IN:
                 DelozeWELSEPPEERPTFFDESCIEDATA.
          DATA:
     TRACEU FROME
          ORIGINATING + REQUIRE YEAR T: ORIGHREQ+ NELS+SIGNAL+OF+INTEREST.
```

```
DATA: D+104+NELS+PPE+BRIFFED+SOI+FREQ+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "PRIMARY EMISSION FREQUENCY TO TUNE TO".
     ENTEREC+PY: "JJF-NELS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+102+NELS+PPE+BRIEFED+SOI+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNAL+OF+INTEREST.
DATA: D+105+NELS+PRE+BRIFFED+SGI+MODULATION+TYPE+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "MODULATION TYPE TO SEARCH FOR".
     ENTERED+BY: "JJF-NELS".
     RANGE: "MODULATED, NOT+MODULATED".
     TYPE: FNUMERATION.
     USF: BOTH.
     INCLHIDED IN:
          DATA: D+102+NELS+PPE+nRIEFFD+SDI+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+PER+NELS+STGNAL+OF+INTEREST.
DATA: 0+106+NELS+PPE+BRIFFFD+SCI+START+FPEQ+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "START FREQUENCY OF A FREQUENCY BAND".
     ENTERED+RY: "JJF-NELS".
     TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: De102+NELS+PRE+BRIEFED+SOI+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: CRIG+RED+NELS+SIGNAL+OF+INTEREST.
DATA: D+109+NELS+TDOA+1+2+DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION: "TODA BETWEEN NELS PLATFORMS 1 AND 2".
     FNTERED+BY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+112+NELS+TDJ4+DU+DATA.
     THACED FROM:
          UFIGINATING CHEUNIREMENT: ORIGOPED CHELS CTARGET COUISITION.
DATA: N+110+NELS+TPOA+1+3+PATA.
     DATE+EMTERED: 11282.
     DESCRIPTION: "TODA BETWEEN NELS PLATFORMS 1 AND 3".
     FATEPED+RY: "JJF-NFLR".
     TYPE: REAL.
     USF: BOTH.
     INCLUOFD I'I
          DATE: DelizeNELS+TROA+DU+DATA.
     TRACED FROM:
          ORIGINATING+REUHIREMENT: ORIGHREGHNELS+TARGET+ACRUISITION.
```

```
DATA: Dellienel Setroga-2-x-Data.
     DATE+ENTERED: 11282.
     DESCRIPTION: "TOOA BETWEEN NELS PLATFORMS 2 AND 3".
     ENTERECORY: "JJF-NELS".
     TYPE: FEAL.
     USE: BOTH.
     INCLUDED IN:
         DATA: D+112+NELS+THOA+DD+DATA.
     TRACED FRUM:
          ORIGINATING*REUHIREMENT: OFIG*REG*NELS*TARGET*ACOUISITION.
DATA: P+112+MELS+TROA+PD+DATA.
    PATE+ENTERED: 11282.
     DESCRIPTION:
             MA RECORD OF TOOA AND DO MEASUPEMENTS FOR A PARTICULAR
   EMISSION".
     ENTEREDORY: "JJF-NELS".
     INCLUDES:
          DATA: 0+058+NELS+DD+1+2+DATA
          DATA: D+059+NELS+DF+1+3+DATA
          DATA: P+060+NELS+D0+2+3+DATA
          DATA: D+109+NELS+TF04+1+2+DATA
          DATA: Dello-NELS-IFOA-1+3-DATA
          DATA: D+111+NELS+TF04+2+3+DATA.
     CONTAINED IN:
          FILE: F+24+NFLS+TDDA+DD+FILE.
     TRACED FROM:
          OPIGINATING+REUNIPEMENT: OPIG+RED+NELS+TARGET+ACQUISITION.
DATA: [+113+NELS+TYPED+EMITTER+REPORT+DATA.
     PATE+ENTERED: 11282.
     DESCRIPTION:
             "CONTENTS OF A TYPED EMITTER REPORT OUTPUT BY
   THE SIGNATURE ANALYSIS ALPHA".
     FNTERED+BY: "JJF-NFLS".
     INCLUDES:
          DATA: D+070+NELS+EMITTER+COV+DATA
          DATA:
                -D+074+NELS+EMITTER+FREGUENCY+DATA
          DATA:
                D+166+NELS+EMITTER+ID+DATA
          DATA:
                P+167+NELS+EMITTER+X+DATA
          UATA:
                P+168+NELS+EMITTER+Y+DATA
          DATA:
                 D+169+MELS+EMITTER+Z+DATA
          DATA:
                De170+SCENARIO+GEN+ID+MUM+DATA
          DATA:
                Det76+NELS+EMITTER+BANDWIDTH+DATA
          DATA: D+177+NELS+EMITTER+CEP+DATA
          DATA: 0+178+NEL SEMITTER+MODULATION+TYPE+DATA
          DATA: De1794NELSEEMITTER+TIME+OF+LOCATION+DATA
          DATA: D+180+NELS+EMITTER+TMAFFIC+TYPF+DATA.
     CONTAINED IN:
          FILE: F+25+NELS+TYPET+FMITTER+REPORT+FILE.
     TRACED FROM:
          ORIGINATING+REGUIPEMENT: OPIG+REC+NELS+SIGNATURE+ANALYSIS.
DATA: DelluePLATFOPMELOCATIONEXEDATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "X COORDINATE OF A PLATFORM".
     ENTERED+BY: "JJF-NELS".
```

TYPE: REAL.

```
USE: BOTH.
     CONTAINED IN:
          FILE: F+33+SENSOR+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIGEREQ+NELS+EXTERNAL+INTERFACE.
DATA: DelisePlatFORM+LOCATION+Y+DATA.
     DATE+ENTERED: 11182.
     PESCRIPTION: "Y CUORDINATE OF A PLATFORM".
     ENTERED+87: "JJF-NFLS".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+33+SENSOR+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          OPIGINATING + REQUIREMENT: OPIG+PEQ+NELS+EXTERNAL+INTERFACE.
DATA: N+116+PLATEOPM+LOCATION+7+DATA.
     DATE + ENTERED: 11182.
     DESCRIPTION: "7 COURDINATE OF A PLATFORM".
     ENTEREDORY: "JJF-NFLS".
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+33+SENSOP+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          ORIGINATING+HERNIFEMENT: ORIGHPLO+NELS+EXTERNAL+INTERFACE.
DATA: P+117+PLATFORM+MOD+X+DATA.
     DATE + ENTERED: 11182.
     DESCRIPTION: "PESIRED Y CUCHDINATE FOR SENSUR POSITION".
     FNTERED+RY: "JJF-NFLS".
     TYPE: REAL.
     HSF: BOTE,
     CONTAINED INT
          FILE: F4324SENSURADRELTAMODS4FILE.
     TRACED FRUM:
          UPIGINATING+REQUIRENEST: ORIGHREQUNELSHEXTERHALHINTERFACE
          ORIGINATING+REQUIREMENT: OFIG+PEQ+SEMSOR+ACTIVITY+FLEMENTS
DATA: D+118+PLATFORM+MOD+Y+DATA.
     DATE+ENTERED: 11162.
     DESCRIPTION: "DESIPED Y COURDINATE FOR SENSOR POSITION".
     ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED THE
          FILE: F+32+SERSUP+ORPIT+ MODS+FILE.
     TRACED FROME
          OPIGINATING+REGUIRENT: UNIG+REG+NELS+EYTERNAL+INTERFACE
          ORIGINATING+REQUIREMENT: UPIG+REQ+SENSOR+ACTIVITY+FLEMENTS
DATA: DeligePLATFORMENODAZEDATA.
     DATE-ENTERFO: 11162.
```

DESCRIPTION: "PESTRED ? CUCHDINATE FOR SENSOR PSOITION".

FRITEDEN+PY: "JJF-HFLS".

TYPE: REAL. USE: BOTH. CONTAINED INT FILE: F+32+SENSOR+ORBIT+MODS+FILE. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE OPIGINATING+REQUIREMENT: ORIG+REG+SENSOR+ACTIVITY+ELEMENTS DATA: D+120+PRECIPITATION+DATA. DATE+ENTERED: 11182. DESCRIPTION: "PRECIPTIATION DATA". ENTEREP+BY: "JJF-NELS". PANGE: "NONE, DRITZLE, HAIM, SNOW, SLEET, HAIL, RIME". TYPE: FNUMERATION. USE: BOTH. INCLUDED IN: DATA: DED38+CONDITIONS+AT+FLEVATION+WEATHER+DATA. TRACED FROM: ORIGINATING + REQUIPEMENT: CRIC+ PER + NELS+STGNAL+ TU+NOISE. DATA: C+121+PHIMARY+ROADS+Y+DATA. TYPE: PEAL. USF: BOTH. CONTAINED IN: FILE: FEZGEPRIMAPYERCADSEFILE. DATA: D+122+PRIMARY+ROADS+Y+DATA. TYPE: REAL. USF: BOTH. CONTAINED IN: FILE: FERBEPRIMAPYERCADSEFILE. DATA: C+123+RAILPUAD+LOC+X+DATA. TYPE: PLAL. USF: BOTH. CONTAINED IN: FILE: F+29+RAILROAD+LOCATIONS+FILE. DATA: D+124+RAILHDAD+LOC+Y+DATA. TYPE: PEAL. HSE: BOTH. CONTAINED IN: FILE: F+29+RAII ROAD+LUCATIONS+FILE. DATA: D+125+RED+DESTINATION+SENSOR+ID+DATA. DATE+ENTERED: 92461. PESCRIPTION: "TOPNTIFICATION OF PEGUFSTED DESTINATION SENSOR". ENTEREDORY: "D HARTSCHUH". RANGE: "GPS+MELS+1, GPS+NFLS+2, GPS+MELS+5". TYPE: ENUMERATION. USE: BOTH. MAKES! MESSAGE: M+10+HELS+SENSOR+PEQUESTS+HSG+OUT. BUTPUT FROM: ALPHA: A+09+NELS+MAKF+SEMSOR+REQUESTS+ALPHA.

DECISION: CUMTENTS+OF+MESSAGE.

TRACED FROM:

```
DATA: D+126+REG+MEPORT+INFORMATION+TYPE+DATA.
     DATE+ENTERED: 92461.
     DESCRIPTION: "REQUESTED REPORT INFORMATION TYPE".
     ENTERED+BY: "D HARTSCHUH".
     USE: BOTH.
     MAKES!
          MESSAGE: M+10+MELS+SENSOR+REQUESTS+MSG+OUT.
     OUTPUT FROM:
          ALPHA:
                 A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA.
     TRACED FROM:
          DECISION: CUNTENTS+OF+MESSAGE.
DATA: D+127+REQ+SENSOR+TARGET+ID+OF+INTEREST+DATA.
     DATE+ENTERED: 92481.
     DESCRIPTION: "IDENTIFICATION OF REQUESTED SENSOR TARGET".
     FNTERED+RY: "D HARTSCHUH".
     USE: BOTH.
     MAKESI
          MESSAGE: M+10+NELS+SENSOR+PERUESTS+MSG+CHT.
     OUTPHT FROM:
          ALPHAS
                 A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA.
     TRACED FROM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: D+128+PIVEU+LOC+Y+DATA.
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+30+RIVFR+LOCATIONS+FILE.
DATA: D+129+PIVER+LUC+Y+DATA.
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+30+RIVER+LOCATIONS+FILE.
DATA: P+130+A+SCENARTO+GFN+IT+NUM+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION:
         "SCENARIO GENERATOR IDENTIFICATION NUMBER
         (INITIALIZED DATA)".
     FNTERED+RY: "JDU865".
     TYPE: INTEGER.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+ENTTTFR+DATA.
     TRACED FRUM:
          ORIGINATING+REUDIREMENT: OHIG+RED+SCENARTO+GENERATION.
DATA: D+130+8+SCENARIO+GEN+10+NUM+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION:
         "SCENARIO GENERATOR TOENTIFICATION NUMBER
         (BEFORE SUT)".
     ENTEREPORY: "JOURNS".
     TYPE: INTEGER.
     USF: BOTH.
```

```
INCLUDED IN:
         DATA: De066+MELS+EMITIF#+ACTIVITY+GHOUND+TRUTH+DATA.
     TRACED FROM:
         ORIGINATING+REQUIREMENT: OPIC+PEC+SCENARIO+GENERATION.
DATA: D+150+SCENARIO+GEN+ID+NUL+DATA.
    PATE+ENTERED: 102781.
    DESCRIPTION: "SCENARIO GENERATOR IDENTIFICATION NUMBER".
    ENTERED+RY: "JJF-ES".
    TYPE: INTEGER.
    USF: BOTH.
    CONTAINED INT
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          URIGINATING+HEUUIREMENT: OPIG+REO+SCENARIO+GENERATION.
DATA: P+131+RECONDARY+POAD+X+DATA.
     TYPE: PEAL.
    USF: BOTH.
    CONTAINED INT
         FILE: F+31+SFCONDARY+ROADS+FILE.
DATA: N+132+SECCNDARY+ROAD+Y+DATA.
     TYPE: REAL.
    USE: BOTH.
     CONTAINED IN:
         FILF: F+31+SECONDARY+ROADS+FILE.
DATA: De1334SECOND+CMUPS+REG+UPDATE+DATA.
    DATE+ENTERED: 91581.
     DESCRIPTION: "A COMMANDERS REQUIREMENT UPD TE MESSAGE LOCATION".
     ENTEREMENT: "D HAPTSCHUHM.
     RANGE: "IS+MODULATED, IS+NOT+MODULATED".
     TYPE: ENUMERATION.
    USF: BOTH.
     CONTAINED IN:
          FILE: F+04+C"DPS+DATA+TO+UPDATE+FILE.
     TRACEU FROM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: D+135+SENSOR+ID+DATA.
     DATE+ENTERFO: 91581.
     DESCRIPTION: "JOENTIFICATION FOR A SENSOR".
     ENTERED+BY: "D HARTSCHUFT.
     FANGE: "NELS+GPS+1, NELS+GPS+2, NELS+GPS+3".
     TYPE: FNUMERATION.
     USE: BOTH.
     MAKES!
          MESSAGE: M+06+NELS+OPRIT+MODIFICATIONS+MAG+IN
          MESSAGE: M+OR+NELS+PFIORITIZED+SFNSOP+DIRECTIONS+MSG+IN
          MESSAGE: M+10+NELS+SENSOF+REQUESTS+MSG+OUT
          MESSAGE: M+11+MELS+SENSOR+SYSTEM+STATUS+MSG+OUT
          MESSAGE: M+14+MELS+TRACK+MESSAGE+MSG+OUT.
     INPUT TO:
         ALPHA: A+10+NELS+MODIFY+ORBIT+ALPHA
          ALPHA:
          A+15+NELS+PRUCESS+PPICRITIZED+SENSOR+DIRECTIONS+ALPHA
          ALPHA: A+17+MELS+SFNSOR+STATUS+ALPHA.
```

```
DUTPUT FROM:
                 A+09+MELS+M4KF+SENSOR+REQUESTS+ALPHA
          ALPHA:
          ALPHA:
                 A+17+NELS+SENSUR+STATUS+ALPHA
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     TRACED FROM:
          OPIGINATING + REUHIPE YEAT:
          OFIGHREN+TAPGET+ID+CRCS9+PEFEPENCE.
DATA: D+136+SENSOR+MODE+OF+OFERATION+DATA.
     DATE+ENTERFO: 11182.
     DESCRIPTION: "MODE OF OPERATION OF SENSOR PLATFORM".
     FNTEREDORY: "JJF-NELS".
     PANGE :
       MSOI+SUPVEILLANCE, SUI+SEARCH, ACI+SURVEILLANCE, ACI+SEARCH,
   TOLE".
     TYPE: FNUMERATION.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+34+SENSUF+STATUS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+RED+NELS+EXTERNAL+INTERFACE.
     REFERRED BY:
          SUBNET: 9+1+CHFCK+MELS+SENSOR+STATUS+SUB.
DATA: D+137+SEMSOF+PRINKITY+DATA.
     DATE+ENTERED: 100581.
     DESCRIPTION: "PRIURITY GIVEN TO A TASK".
     FNTEREDORY: "D HAPTSCHUH".
     TYPE: INTEGER.
     HSF: BOTH.
     MAKES:
          MESSAGE: M+02+NELS+PFIDHITIZED+SENSOR+DIRECTIONS+MSG+IN.
     INPUT TO:
          ALPHA:
          A+15+VELS+PFOCESS+PPICRITIZED+SENSOR+DIRECTIONS+ALPHA.
     TRACED FROM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: P+13P+TASKING+RESPONSE+DATA.
     DATE+ENTERED: 91581.
     DESCRIPTION: "PESPONSE ID A TASK".
     ENTEREDORY: "D HARTSCHUHT.
     PANGE: "CANADO, CANTADO".
     TYPE: FNUMERATION.
     HSF: BOTH.
     MAKEE:
          MESSAGE: M+13+NELS+TASKING+PESPONSES+M9G+DUT.
     CHIPHT FROM:
          ALPHA: A+11+VELS+MODIFY+TASK+ALPHA.
     THACED FROM:
          OFCISION: CONTENTS+OF+MESSAGE.
DATA: 0+139+TASK+30E+10+0ATA.
     DATE +ET TERFO: 91581.
     OESCOIPTION:
               "IDE" TIFICATION OF ELEMENT WITHIN THE TASKING
  WLEHEM.
     ENTEREMORY: "D. HARTSCHUHM.
```

```
TYPE: INTEGEH.
    USE: BOTH.
    MAKESI
          MESSAGE: M+04+NELS+MODIFIED+TASK+MSG+IM
          MESSAGE: M+13+MELS+TASKING+RESPONSES+MSG+OUT.
     INPUT TO:
          ALPHA: A+11+"LLS+MODIFY+TASK+ALPHA.
     PUTPUT FROM:
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA.
     TRACED FROM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: PE140+TF0+PATA.
    PATE+ENTERFO: 90481.
    DESCRIPTION: MPRESENTLY UNKNOWN ENTITY SELECTION CRITEPIONM.
    FNTEREMORY: "JJF-TC".
     INTITAL + VALUE: TRUE.
     TYPE: BUDLEAM.
    USF: BOTH.
     ASSOCIATED WITH:
          ENTITY+CLASS: FC+1+NFLS+DETECTAHLF+EMISSION+PRFAKOUT+EC
          ENTITY+CLASS: FC+2+NFLS+SCENARIO+EC
ENTITY+CLASS: FC+3+NFLS+TASKS+FC
          ENTITY+CLASS: FC+4+ OF LS+THREAT+FC
          ENTITY+CLASS: FC+S+HFLS+VEHICLF+CHARACTERISTICS+FC.
     TRACED FRUM:
          UPISINATING+REGGIPENELT:
          UPIGERENETCEMESSAGESETGECONTROLEANDEDISPLAY
          ORIGINATING + REGUIPENERT: OPIG+PER+TC+CPERATOR.
     PEFFPHFD BY:
          HENET: REZEMODELENELSERENSORESYSTEMEREMET
          SHENET: S+1+CHECK+NELS+SENSOR+STATUS+SHE
          SHERET: SEEMHORELETEL SEGRESEPROCESSINGEROR
          SUBNET: SHAFMORELFMELSFPLATFORMESUR
          SUBNET: S+5+FONEL+FELS+SFNSOR+SUB.
DATA: P+141+TIME+DATA
     PATE + ENTERED: 90481.
     DESCRIPTION:
             "TIME FLAPSED PASED ON & 24 HOUR CLOCK!
   A CURRENT PLANS PERIOD LASTS 24 HOURS".
    ENTEREDERY: "JJF-TC".
     TYPE: PEAL.
    USF: HOTH.
    MAKES:
          MESSAGE: ME13+MELS+TASKING+RESPONSES+NSG+UUT.
     INPUT TO:
                 A+OP+GENE PATE+DMF+ALPHA
          ALPHA:
          ALPHA:
                 A + 11+ WEL SHAPLITH YOTASK + ALPHA.
     OUTPHT FRO !:
          ALPHA: A+11+NELS+MODTFY+TASK+ALPHA.
     TRACED FROM:
          OPTGIMATING+REQUIREMENT: UPIG+PEC+TC+CYCLE+START
          UPIGINATINGERFUNIREMENT: URISERECETCESYNC.
DATA: D+142+THACK+NESSAGF+DATA.
     DATE+ENTEREU: 11182.
     DESCRIPTION: "THEORMATTOR DESCRIPING A TARGET TRACK".
```

```
ENTEPED+RY: "JJF-NELS".
    RANGE: "TRACKING, CAN+TPACK, WILL+LOSE+TPACK".
     TYPE: ENUMERATION.
    USE: BOTH.
    MAKES:
         MESSAGE: M+14+NELS+TRACK+MFSSAGE+MSG+OUT.
    DUTPUT FROM:
         ALPHA: A+20+NELS+SURVETLLANCE+AND+TRACK+MSGS+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: URIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+143+X+LOC+FEASTBLE+DATA.
     DATE+ENTERED: 100581.
     DESCRIPTION: "X+AXIS LOCATION OF A FEASIBLE TARGET".
     ENTERED+BY: "D HARTSCHUH".
     TYPE: PEAL.
    USF: BOTH.
     CONTAINED IN:
          FILE: F+OS+FEASIBLE+ACTIVITY+APEA+FILE.
     TRACED FROM:
          URIGINATING+REQUIREMENT: URIG+REQ+SENSOR+FEASIRILITY.
DATA: D+144+X+WEATHER+LUC+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: MY LOCATION OF WEATHER ALTITUDE DATAM.
     FNTERED+RY: "JIF-NELS".
     TYPE: REAL.
    USF: BOTH.
     CONTAINED INT
         FILE: F+26+NEL3+NEATHER+CONDITIONS+FILE.
     TRACEU FROM:
          URIGINATING + REQUIPEMENT: OPIG + REQ + NEL S+STGNAL + TO+NOISE.
DATA: De145+Y+LOC+FEASIBLE+DATA.
     DATE+ENTERED: 100581.
     DESCRIPTION: "Y-AXIS LOCATION OF A FEASIBLE TARGET".
     FNTEREDERY: "D HAPTSCHUH".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+05+FEASIBLE+ACTIVITY+AREA+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+SENSOR+FEASIBILITY.
DATAL P+146+Y+WEATHER+LOC+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION: "Y LOCATION OF MEATHER AUTITUDE DATA".
     ENTEPER+RY: "JJF-NFLS".
     TYPE: PLAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+26+NFLS+WEATHFR+CONDITIONS+FILE.
     TRACED FROM:
          OPIGINATING+RENUIGEMENT: ORIGEREDENELS+STGNAL+TO+NOISE.
DATA: D+147+MELS+EMISSION+DUPATION+DATA.
     DATE+ENTFRED: 22483.
     DESCRIPTION:
```

```
TTIME THAT EMITTER IS EMITTING AND REING LISTENED
TO BY NELS. (DETECTED EMISSION)".
     ENTERED+BY: "JDUBBS".
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETFCTED+CANDIDATE+TARGETS+FILE.
     TRACED FRUM:
          ORIGINATING + REGHIPEMENT: ORIG+REG+NELS+ADI.
DATA: D+14F+NELS+EMISSION+SIGNAL+STRENGTH+DATA.
     DATE+ENTERFU: 22483.
     DESCRIPTION:
#S/N STRENGTH OF SIGNAL FOR A SINGLE SENSOR; STRENGTH
DATA FROM AT LEAST TWO SENSORS IS REQUIRED REFORE A DETECTION CAN
BE CONFIRMED (DETECTED EMISSION) .
     ENTERED+BY: "JDURBS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
         FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REGHIREMENT: ORIGERECHNELS+AOI.
DATA: D+149+NELS+EMISSION+START+TIME+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: " TIME FMISSION STARTS (OFFECTED FMISSIONS)".
     ENTERED+8Y: "JDURES".
     TYPE: PEAL.
    UNITS: HRS+MIN+SEC.
     USE: BOTH.
     CONTAINED INS
          FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REDUIREMENT: DRIG+RED+SCENARIO+TIMING.
DATA: D+150+NELS+EMITTFR+FREQUENCY+BANDWIDTH+DATA.
     DATE+ENTFRED: 22463.
     DESCRIPTION:
     *BANDWIDTH OF MARROWPAND EMISSION (DETECTED EMISSION)*.
     FNTERED+BY: "JOURBS".
     TYPE: REAL.
     UNITS: HERTZ.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+12+OFTECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REUHIREMENT: ORIG+PEC+PRODUCE+SCENARIO.
DATAL P+151+MELS+EMITTER+ID+PATA.
     DATE+ENTERED: 22463.
     DESCRIPTION: "IDENTIFIER OF EMITTER (UETFCTED EMISSION)".
     FNTEREP+RY: "JDUBUS"
     RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUB, MISSTLF, UNKNOWN".
     TYPE: ENUMERATION.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+12+UETFCTED+CANDIDATE+TARGETS+FILE.
```

TRACED FROM: OPIGINATING+REQUIREMENT: OPIG+REQ+PRODUCE+SCENARIO. DATA: D+152+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA. DATE+ENTERED: 22483. **DESCRIPTION:** TRANSMISSION PREQUENCY OF EMITTER (DETECTED EMISSION). ENTERED+RY: "JOURNS". TYPE: REAL. UNITS: HERTZ. USF: BOTH. CONTAINED IN: FILE: F+12+DETFCTED+CANDIDATE+TARGETS+FILE. TRACED FROM: ORIGINATING+REUUIPEMENT: ORIG+PEQ+PRODUCE+SCENARIO. DATA: D+153+NELS+EMITTFR+X+DATA. DATE+ENTERED: 22483. DESCRIPTION: "DISTANCE EAST/WEST (DETECTED EMISSION)". ENTEREDORY: "JOURBS". TYPE: PEAL. HNITS: KM. USF: BOTH. CONTAINED IN: FILE: F+12+DETECTEC+CANDIDATE+TARGETS+FILE. TRACED FROM: ORIGINATING+REQUIREMENT: OPIG+REQ+PRODUCE+SCENARIO. DATA: D+154+NELS+EMITTER+Y+DATA. DATE+ENTERED: 22483. DESCRIPTION: "DISTANCE NORTH/SOUTH (DETECTED EMISSION)". ENTEREDORY: "JOURGS". TYPE: REAL. UNITS: KM. USE: BOTH. CONTAINED INS FILE: F+12+DFTFCTED+CANDIDATE+TARGETS+FILE. TRACED FROM: OPIGINATING+REQUIREMENT: ORIGHREQ+PRODUCE+SCENARIO. DATA: D+155+NELS+EMITTER+Z+DATA. DATE+ENTERFD: 22483. DESCRIPTION: "ALTITUDE/ELEVATION (DETECTED EMISSION)". ENTEREC+PY: "JOURBS". TYPE: REAL. UNITS: METERS. USE: BOTH. CONTAINED IN: FILE: F+12+DETFCTED+CANDIDATE+TARGETS+FILE. TRACED FPOM: ORIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO. DATA: D+156+SCENARTO+GEN+IP+NUM+DATA. DATE+ENTERED: 22483. DESCRIPTION: "SCENARIO GENERATOR IDENTIFICATION NUMBER (DETECTED EMISSION) ". ENTERED+BY: "JOURBS".

```
TYPE: INTEGER.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETECTEC+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          UPIGINATING+REGHIREMENT: OPIG+REG+SCFNARTO+GENERATION.
DATA: D+157+NELS+EMISSION+DURATION+DATA.
     PATE+ENTERED: 22483.
     DESCRIPTION:
TIME THAT EMITTER IS EMITTING AND REING LISTENED
TO BY NELS. (TOOA DD)".
     ENTEREDARY: "JOURNS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+089+NELS+ESTIMATED+GROUND+TRUTH+DATA.
     THACED FROM:
          OFIGINATING+REGHIPEMENT: OFIG+REG+NELS+AGI.
DATA: P+15A+NELS+EMISSION+START+TIME+DATA.
     PATE+ENTERED: 22483.
     DESCRIPTION: " TIME EMISSION STARTS (TODA DD)".
     ENTERED+RY: "JOURES".
     TYPE: PEAL.
     UNITS: HPS+MIN+SFC.
     USE: BOTH.
     INCLUDED IN:
          DATA: DECRRENEL SEESTIMATED + GROUND + TRUTH + DATA.
     THACED FROM:
          OPIGINATING+REGHIREMENT: UPIG+RED+SCENARTU+TIMING.
DATA: D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA.
     DATE+ENTFRED: 22483.
     CESCRIPTION: "RANGWINTH OF NARPOHBAND EMISSION (TODA DO)".
     FATERED+RY: "JOURBS".
     TYPE: PEAL,
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+088+UELS+ESTIMATED+EMITTER+PARAMETERS+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: OPIG+PER+PRODUCE+SCENARIO.
DATA: DA160+NELS+EMITTFH+ID+DATA.
     DATE+ENTERED: 22483.
     MESCHIPTION: MIDENTIFIER OF EMITTER (TOOK DO)M.
     FINTEREDERY: "JOURNS"
     PANGE: "PADIU, TANK, TOUCK, PLANE, SHIP, SUP, MISSILE, UNKNOWN".
     TYPE: FRUMERATION.
     HSF: BOTH.
     INCLUDED IN:
          DATA: Dender HEL SESTIMATED GROUND TRUTHEDATA.
     THACED FROM:
          OPIGINATING+REQUIPENENT: OPIG+PER+PHODUCE+SCENARIO.
DATA: PA161+NELSEEMITTERATRANSMISSIONAFREUDENCYADATA.
     PATE+ENTERED: 22483.
```

```
DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (TDOA DD)".
     ENTERED+BY: "JOURSS".
     TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: Dendaenel Seestimatedeemittereparametersenata.
     TRACED FROM:
          ORIGINATING + REQUIREMENT: ORIGHREQ + PRODUCE + SCENARIO.
DATA: D+162+MELS+EMITTER+X+DATA.
     PATE + ENTERED: 22483.
     DESCRIPTION: "DISTANCE EAST/ VEST (TODA OD)".
     ENTERED+RY: "JOURNS".
     TYPE: REAL.
     UNITS: KM.
     USF: 60TH.
     INCLUDED IN:
          DATA: "MEOBYENE! SEESTIMATEDEGROUNDETRUTHEDATA.
     TRACED FRUM:
          ORIGINATING+REGULFENENT: OPIG+REQ+PRODUCF+SCENARIO.
DATA: D+163+NFLS+EMITTEH+Y+DATA.
     DATE + ENTERED: 22443.
     DESCRIPTION: "PISTANCE HORTH/SOUTH (TUNA UN)".
     ENTEREDORY: "JOURNS".
     TYPE: PEAL.
     UNITS: KM.
     USF: BOTH.
     INCLUDED IN:
          DATA: DENNITHELSEESTIMATEDEGROUNDETRUTHEDATA.
     TRACED FRO 4:
          ORIGINATING CHENUIPERENT: OPIGERER CPRODUCTESCENARIO.
DATAL DATAGENELSAEMITTERAZADATA.
     DATE + ENTEREU: 22483.
     DESCRIPTION: "ALTITUDE/ELEVATION (TODA UD)".
     ENTEPED+HY: "JOURNS".
     TYPE: PEAL.
     UNITS: METERS.
     USE: BOTH.
     INCLINATO IN:
          DATA: DECEMBER SEESTIMATEDEGROUNDETRUTUEDATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIGHEC+PRODUCF+SCENAKIO.
DATA: De165+SCEWARTU4GEN+ID+MUM+DATA.
     DATE+ENTFRFU: 22483.
     DESCRIPTION:
         *SCENARIO GENERATOR IDENTIFICATION NUMBER
         CIDUA DIDI".
     ENTEREDORY: "JOURNS".
     TYPE: INTEGE".
     USF: BOTH,
     INCLUDED IM:
          DATA: PARAGAREL SEESTIMATEREBRUINDATPUTHERATA.
     THACED FROM:
          OFIGINATING ENFORMEMENT: OPIGERECESCENARTOEGENERATION.
```

```
DATA: P+166+MELS+EMITTER+ID+DATA.
     PATE+ENTEREDI 22483.
     DESCRIPTION: "IDENTIFIER OF EMITTER (REPORT DATA)".
     ENTERED+BY: "JDUBBS".
     RANGE: "PADIO, TANK, TRUCK, PLANE, SHIP, SUB, MISSILE, UNKNOWN".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+E"ITTER+REPORT+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REQ+PRODUCF+SCENARIO.
DATA: D+167+NELS+EMITTER+X+DATA.
     DATE+ENTERED: 22463.
     DESCRIPTION: "DISTANCE EAST/WEST (PEPORT DATA)".
     ENTERED+RY: "JOURBS".
     TYPE: REAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: 0+113+NELS+TYPEC+EMITTER+REPORT+DATA.
     TRACED FROM:
          URIGINATING+REDUIREMENT: ORIC+RED+PRODUCF+SCENARIO.
DATA: C+168+NELS+EMITTER+Y+DATA.
     DATE + ENTERED: 22483.
     DESCRIPTION: "DISTANCE NORTH/SOUTH (REPURT DATA)".
     ENTEREPORY: "JOURES".
     TYPE: PEAL.
     HNTTS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: Dellather Strypfore TITTER GREPORT COATA.
     TRACED FROM:
          ORIGINATING+REUDIREMENT: OPIG+REQ+PRODUCF+SCENARIO.
DATA: DAISONNELSEEMITTERAZADATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "ALTITUDE /ELEVATION (REPORT DATA)".
     ENTEPED+RY: "JOUBBS".
     TYPE: REAL.
     UNITS: METERS.
     USE: BOTH.
     INCLUDED IN:
          DATA: DelizeNELSETYPFILEMITTEREREPORTEDATA.
     TRACED FROM:
          URIGINATINGEREQUIPEMENT: ORIGEREGEPRODUCFESCENARIO.
DATA: P+170+SCENARIO+GEN+ID+MUN+DATA.
     DATE + ENTEREDI 22483.
     DESCRIPTION:
         "SCEMAPIO GEMERATOR TOENTIFICATION NUMBER
         (REPORT DATA)".
     ENTEREDONY: "JOURS".
     TYPE: INTEGER.
     I'SE: BOTH.
     INCLUDED IN:
```

DATA: D+113+NEIS+TYPED+EMITTER+REPORT+DATA.
TRACED FROM:
OPIGINATIMG+REQUIREMENT: ORIGHREQ+SCENARIO+GENERATION.

DATA: D+171+NELS+EMITTER+ID+DATA.

DATE+ENTERED: 22483.

DESCRIPTION: "IOENTIFIER OF EMITTER (TDDA DD)".

ENTEREC+BY: "JDURBS".

RANGE: "RADIO, TANK, TPUCK, PLANE, SHIP, SUB, MISSILF, UNKNOWN".

TYPE: ENUMERATION.

HSE: BOTH.

INCLUDED IN:

DATA: D+065+NELS+E*ISSTO*+THPEAT+TABLE+DATA.

TRACED FRUM:

OPIGINATING+REQUIPE*ENT: OPIG+PEO+PRODUCF+SCFNARIO.

DATA: D+172+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA.

DATE+ENTERED: 22483.

DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTEM (TODA DD)".

ENTERED+BY: "JDURBS".

TYPE: REAL.

UNITS: HERTZ.

USF: BOTH.

INCLUDED IN:

DATA: D+065+NELS+EMISSION+THREAT+TABLE+DATA.

TRACEO FROM:

ORIGINATING & REMUIREMENT: URIGERED & PRODUCE + SCENARIO.

DATA: De173eNELSEMITTEREXEDATA.

DATE-ENTERED: 22483.

DESCRIPTION: "DISTANCE EAST/WEST (TODA DD)".

ENTEREPERY: "JDUBOS".

TYPE: PEAL.

UNITS: KM.

USE: BOTH.

INCLUDED IN:

DATA: De065eNelsemissionethreatetableedata.

TRACED FROM:

OPIGINATINGEREQUIREMENT: ORIGEPEREPRODUCEESCENARIO.

DATA: D+174+NELS+EMITTER+Y+DATA.

DATE+ENTERED: 22483.

DESCRIPTION: "PISTANCE NORTH/SOUTH (TDOA DD)".

FNTERED+9Y: "JDURUS".

TYPE: REAL.

UNITS: KM.

USE: BOTH.

TNCLUDED IN:

DATA: D+065+NELS+EMISSIUN+THREAT+TABLE+DATA.

TRACED FROM:

ORIGINATING+REGHIREMENT: OPIG+PEG+PRODUCF+SCENAKIU.

DATA: D+175+NELS+EMITTEP+2+UATA.

DATE+ENTERED: 22483.

DESCRIPTION: "ALTITUDE/ELEVATION (TDOA UP)".

FNTERED+9Y: "JDURUS".

TYPE: REAL.

UNITS: METERS.

```
USF: 9014.
     INCLUDED IN:
         DATA: D+065+MELS+EMISSION+THREAT+TABLE+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: URIG+PER+PRODUCF+SCENARIO.
DATA: Del76+NELS+EMITTEP+BANDHTDTH+DATA.
    DATE+ENTERED: 30383.
     DESCRIPTION: " BANDWIDTH OF EMISSION(S) EMITTER EMITS (REPORT)".
    FATERED+RY: "JOURBS".
    TYPE: PEAL.
    UNITS: HERTZ.
    DSF: BOTH.
    INCLUDED IN:
         DATA: D+113+NELS+TYPED+E*ITTER+REPORT+DATA.
     TRACED FROM:
         DRIGINATING+REQUIREMENT: OPIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+177+MELS+EMITTER+CEP+DATA.
    DATE+ENTERED: 30383.
     DESCRIPTION:
" CIRCULAR ERROR PROBABLE ESTIMATE FOR A NELS
DETECTABLE EMITTER (REPORT)".
    ENTERED+RY: "JOURBS".
     TYPE: REAL.
    USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPFD+EMITTER+REPORT+DATA.
     TRACEU FROM:
          ORIGINATING+REQUIREMENT: OPIG+RED+NELS+THREAT+TABLE+UPDATE
DATA: D+17R+NELS+EMITTER+MODULATION+TYPE+DATA.
    DATE+EUTERED: 30383.
     DESCRIPTION: "TYPE OF MODULATION EXHIBITED BY EMITTER (REPORT)".
     ENTERED+RY: "JOURGS".
    RANGE: "MODULATED, NOT+MODULATED".
     TYPE: ENUMERATION.
    USF: BOTH.
     INCLUDED IN:
          DATA: D+113+VELS+TYPFD+EMITTER+REPORT+DATA.
     TRACED FROM:
          ORIGINATING+REGHIREMENT: OPIG+REG+NELS+EXTERNAL+INTERFACE.
DATA: D+179+NELS+EMITTER+TIME+CF+LOCATION+DATA.
     DATE+ENTERED: 30383.
     DESCRIPTION: "TIME AT WHICH THE EMITTER WAS LOCATED (REPORT)".
     ENTEREDORY: "JOURSS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REG+NELS+THREAT+TABLE+UPDATE
DATA: D+180+NELS+EMITTER+TPAFFIC+TYPE+DATA.
```

DATE+ENTERED: 30383.

```
DESCRIPTION: " TRAFFIC TYPE CODE FOR A NELS FMITTER (REPORT)".
     ENTEREPORY: "JOURGS"
     RANGE: "PASSIVE, POTENTIAL + THREAT, THREAT".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: De113+NELS+TYPED+EMITTEM+REPORT+DATA.
     TRACED FRUM:
          OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+THREAT+TABLE+UPDATE
DATA: P+181+NELS+EMITTFR+MODUL&TION+TYPE+DATA.
     PATE+ENTERED: 30383.
     DESCRIPTION: "TYPE OF MODULATION EXHIBITED BY EMITTER (TABLE)".
     ENTEPED+BY: "JOURBS".
     PANGE: "MODULATED, NOT+MUDULATED".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+065+NELS+EMISSTON+THPEAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REG+NELS+EXTERNAL+INTERFACE.
DATA: DelazeNELSEMITTER-BANDHIOTHEDATA.
     DATE+ENTERED: 30383.
     DESCRIPTION: " BANDWIDTH OF EMISSION(S) EMITTER EMITS (TABLE)".
     FNTERED+RY: "JOURGS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: BOTH.
     INCLUDED IN:
          DATA: 0+065+NELS+EMISSION+THPEAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REG+NELS+EXTERNAL+INTEPFACE.
DATA: D+183+NELS+EMITTER+CEP+DATA.
     PATE+ENTERED: 30363.
     PESCPIPTION:
* CINCULAR ERROR PROBABLE ESTIMATE FOR A NELS
DETECTABLE PHITTER (TABLE) ".
     FNTERENARY: "JOURHS"
     TYPE: FEAL.
     HSF: BOTH.
     INCLUDED IN:
          DATA: DAGGS+HELS+EMISSION+THREAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+RESHIREMENT: OPIG+PES+NELS+THREAT+TABLE+UPDATE
DATA: FOUNT.
     DESCRIPTION:
              TA PREDEETIED DATA TIEM WHICH IS SET TO EITHER
              TRUE OR FALSE AFTER EACH SELECT ON AN ENTITY-TYPE
              UP ENTITY+CLASS. FOUND IS SET TO TRUF IF AN
              INSTAICE SATISFYING THE SELECTION CRITERION IS
              LOCATED: OTHERAISE, FOUND IS ASSIGNED THE VALUE
              FALSE.".
     INTTIAL - VALUE: FALSE.
```

LOCALITY: LOCAL.
TYPE: BOOLEAN.
USF: BOTH.

DATA: RECORD+FOUND.

DESCRIPTION:

"A PREDEFINED DATA THEM WHICH IS SET TO ETTHER TRUE OF FALSE AFTER FACH SFLECT ON A FILE IN A BETA OR GAMMA. RECORD-FOUND IS SET TO TRUE IF A RECORD SATISFYING THE SELECTION CRITERION IS LOCATED; OTHERWISE, PECORD-FOUND IS ASSIGNED THE VALUE FALSE.".

INITIAL + VALUE; FALSE, LOCALITY: LOCAL, TYPE: BUOLEAN, USF: BOTH,

DECISION: CUNTENTS+UF+"ESSAGF.
ALTERNATIVES:

"DOES THE HIMIYUM PERUIREMENTS FOR A MESSAGE ALLOW THE MESSAGE TO PERFORM SPECIFIC FUNCTIONS OR NOT", CHOICE:

"THE MINIMUM REQUIREMENTS DO NOT ALLOW THE MESSAGE TO PERFORM ITS SPECIFIC TASK".

DESCRIPTION:

"THE MINIMUM REGULEMENTS ARE INCLUDED IN A MESSAGE IN ORDER TO PERFORM ANY NECESSARY FUNCTIONS. THE RELIEVED MINIMUM MAY NOT ACTUALLY BE SUFFICIENT HOWEVER".

PROBLEM:

"SPECIFICATIONS MANUAL DOES NOT INDICATE THE CONTENTS OF SUME MESSAGES AND IN INDECISIVE FOR OTHERS".

THACES TO:

DATA: P+040+FIFST+CMORS+REG+UPDATE+0 .TA

DATA: D+056+NEFDED+FEASIBLE+DATA

DATA: 0+125+PED+DESTINATION+SEMSOR+ID+DATA

DATA: P+126+PEG+REPURT+1"FORMATION+TYPE+DATA

DATA: "+127+PED+SENSCR+TARGET+ID+OF+INTEREST+DATA

DATA: D+133+SECOMU+CMDRS+REG+UPDATE+DATA

DATA: De137+SENSOR+PFIGRITY+DATA

DATA: D+138+TASKING+PESHONSE+DATA

DATA: De130+TARK+UILE+ID+DATA.

DECISION: DECISION+MESSAGE+ROUTING+METHOD.
ALTERNATIVES:

"LET THE KNUTTING CODE CONSIST OF NOTHING OR GIVE IT

A FORM".

CHOICE:

"ROUTING COUR CONSTSTS OF A MESSAGE MAME, THE MESSAGE SOURCE, AND THE MESSAGE DEFINITION".

DESCRIPTION:

"THE MESSAGE BOUTING CODE IS USED TO DETERMINE MESSAGE TYPE AND THEMEFORE THE PROPER ACTIONS TO BE DEPENDED. THE CODE CONSISTS OF A MESSAGE NAME, THE MESSAGE SOURCE, AND THE MESSAGE DEFINITION".

PROBLEM:

"SPECIFICATION MAMUAL PEFFRS TO A ROUTING CODE WHICH IS SPECIFIC FOR EACH TYPER OF MESSAGE OR REPORT, PUT THERE IS NO INDICATION AS TO WHAT THAT CODE CONSISTS OF".

```
TRACES TO:
```

DATA: D+002+ASET+MSG+DESI+DATA

DATA: D+003+45ET+MSG+10+DATA

DATA: D+004+ASET+MSG+NAME+DATA

DATA: D+005+ASET+4SG+SOURCE+DATA.

DECISION: HIGHLY+SUSPECT+1TEM.

DESCRIPTION:

MAN ITEM WITHIN THE CREATED STRUCTURES THAT MAY BE

TOTALLY WRONG DUE TO A MISINTERPRETATION BY A SREMER".

PROBLEM:

"TH RE ARE MANY AREAS IN THE ASE SPECIFICATION WHERE THE REQUIREMENT IS STATED PUT LITTLE OF NO INFORMATION IS GIVEN AS TO

HOW THE ITEM IS TO BE REPRESENTED .

TRACES TO:

DATA: D+004+ASET+4SG+NAME+DATA.

ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC.

DATE+ENTERED: 20382.

DESCRIPTION:

"THIS CLASS IS COMPOSED OF THE CAMDIDATE TARGETS AS

THEY PASS EACH TEST".

ENTERED+RY: "JJF=NELS".

ASSOCIATES:

DATA: P+140+THD+DATA.

COMPOSED UF:

ENTITY+TYPE: ET+10+GROUND+SHADOWING+CANDIDATF+TARGETS+ET

ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET

ENTITY-TYPE: ET+R+MELS+PRE+BPIFFFD+AMI+ET

ENTITY+TYPE: ET+9+SIGNAL+NDISE+CANDIDATE+TARGETS+ET.

CREATED PY:

ALPHA: A+04+INITIALIZE+NELS+ALPHA.

TRACED FROM:

ORIGINATING+REQUIREMENT: ORIGHREQ+NELS+ADI

ORIGINATING+REQUIREMENT: ORIGHRENHNELS+STGHAL+OF+INTFREST.

ENTITY+CLASS: EC+2+NELS+SCENARTO+EC.

DATE+ENTERED: 20382.

DESCRIPTION: "INFORMATION PERTAINING TO THE NELS SCENARION".

ENTEREDORY: "JJF-NELS".

ASSOCIATES:

DATA: 0+140+TBN+PATA.

COMPOSED OF:

ENTITY+TYPE: ET+2+htl.S+EMITTER+GROUND+TRUTH+FT

ENTITY+TYPE: ET+7+NELS+WEATHER+ET.

CREATED RYS

ALPHA: A+04+INTTIALIZE+NELS+ALPHA.

DESTROYED BY:

ALPHA: A+24+RESET+NELS+ALPHA.

TRACED FROM:

OPIGINATING*REQUIREMENT: ORIG*REQ*NELS*EXTERNAL*INTERFACE ORIGINATING*REQUIREMENT: ORIG*REQ*NELS*STGNAL*TO*NOISE.

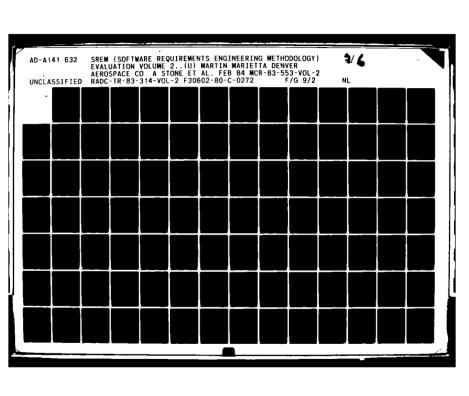
ENTITY+CLASS: EC+3+NFLS+TASKS+FC.

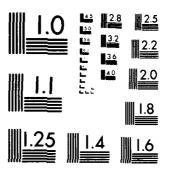
DATE+ENTERFO: 20382.

DESCRIPTION: "TASK RELATED INFORMATION".

ENTEREDORY: "JJF-NFLS".

ASSOCIATES:





MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963-A

```
DATA: 0+140+THR+RATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+3+HELS+FLIGHT+FT
          ENTITY+TYPE: ET+4+HELS+FREQUENCY+SCAN+FT.
     CREATED BY:
          ALPHA:
                 A+04+INTTTAL [7E+NFLS+4LPHA.
     DESTROYED BY:
          ALPHA:
                 A+24+RESET+NELS+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT:
          ORIGHRER-GENERATE+PLATFORM+MEASUREMENTS
          ORIGINATING+REQUIREMENT: OPIG+PED+NELS+ADI
          ORIGINATING+REUHIREMENT: ORIG+REG+NELS+STGNAL+TO+NCISE.
ENTITY+CLASS: EC+4+NELS+THREAT+ET.
     DATE+ENTERED: 20382.
     DESCRIPTION:
             "POTENTIAL NELS-DETECTABLE THREATERING
   TARGETS"
     FNTERED+RY: "JJF-NELS".
     ASSOCIATES:
          DATA: D+140+T-5+DATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET.
     CREATED BY:
          ALPHA:
                 A+O4+INTTIALIZE+NELS+ALPHA.
     DESTRUYED BY:
          ALPHA: A+24+FESET+NELS+ALPHA.
     TRACED FROM:
          OPIGINATINGEREQUIREMENT: ORIGEPERENELSETHREATETARLEE-UPPATE
ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+FC.
     DATE+ENTFRED: 20382.
     DESCRIPTION: "VEHICLE CHARACTERISTICS".
     ENTEPEDOPY: "JJF-NELS".
     ASSOCIATES:
          DATA: De140+TUN+DATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERTSTICS+ET.
     CREATED PYL
          ALPHA: A+04+INTTTAL [ZE+NFLS+ALPHA.
     DESTRUYED BY:
          ALPHA: A+24+PERET+NELS+ALPHA.
     TRACED FROM:
          OPIGINATING+REGUIREMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
ENTITY+CLASS: EC+6+DETECTED+EMISSIONS+INFO+EC.
     DATE+ENTEREU: 22383.
     DESCRIPTION:
ATHIS CLASS WILL CONSOLIDATE THE DETECTED EMISSIONS
INFORMATION AS IT GETS PASSED THROUGH THE
TODA, OF PROCESS, AND THE CHARSE AND FINE LOCATION PROCESSES".
     ENTERED+RY: "JOURAS".
     COMPOSED OF:
          ENTITY+TYPE: ET+11+DFTFCTEP+EMTSSIONS+DD+TDOA+FT
          ENTITY+TYPE: ET+12+DFTECTED+EMISSIONS+COARSE+ET
          ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+ET.
```

COMPOSES:

```
CREATED BY:
             ALPHA:
                    A+04+INTTIALITE+NFLS+ALPHA.
        DESTROYED BYE
             ALPHA: A+24+PESET+NELS+ALPHA.
  ENTITY+TYPE: ET+10+GPUUND+SMADCWING+CANDIDATE+TARGETS+ET.
       DATE+ENTERFD: 22283.
       DESCRIPTION:
"CARRIES THOSE TARGETS WHICH PASS THE GROUND SHADOWING TEST".
       ENTERED+BY: "JOUBBS".
        ASSOCIATES:
             FILE: F+10+NELS+CANDIDATE+TARGETS+FILE
             FILE: F+12+DETFCTED+CANDIDATE+TAPGETS+FILE.
        COMPOSES:
            ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+RREAKOUT+EC.
        TRACED FROM:
             ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EMITTER+DEFAULT.
  ENTITY+TYPE: ET+11+DETECTED+FMISSIONS+DD+TDOA+FT.
        DATE+ENTERED: 22283.
        DESCRIPTION:
  "HOLDS EMITTER DATA THAT HAS GONE THROUGH TODA, AND
  DD PROCESSING".
        FNTERED+8Y: "JDU865".
        ASSOCIATES:
                   F+17+NELS+FSTIMATED+FMITTER+PARAMETERS+FILE
             FILE:
             FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
        COMPOSES:
            ENTITY+CLASS: EC+6+DETECTED+EMISSIONS+INFO+EC.
        TRACED FROM:
             ORIGINATING+REQUIREMENT: ORIG+REG+NELS+TARGET+ACQUISITION.
  ENTITY+TYPE: ET+12+DETECTED+EMISSIONS+COARSE+ET.
        DATE+ENTERED: 22383.
        DESCRIPTION:
  *HOLDS EMITTER DATA THAT HAS GONE THROUGH
   THE COARSE LOCATING FUNCTION".
        ENTERED+RY: "JOURSS".
        ASSOCIATES:
             FILE: F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE
             FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
        COMPOSES:
             ENTITY+CLASS: FC+6+DETECTED+EMISSIONS+INFO+EC.
        TRACED FROM:
             ORIGINATING+REQUIREMENT:
             ORIGHREG+NELS+COARSE+AND+FINE+LOCATION.
  ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+ET.
        DATE+ENTERED: 22383.
        DESCRIPTION:
  "HOLDS EMITTER DATA THAT HAS GONE THROUGH
   THE FINE LOCATING FUNCTIONS.
        ENTEREDORY: "JOURBS".
        ASSOCIATES:
             FILE: F+17+NFLS+ESTI*ATED+EMITTER+PARAMETERS+FILE
            FILE: F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE.
```

ENTITY+CLASS: FC+6+DETECTED+EMISSIONS+INFO+EC.

TRACED FROM: OPIGINATING+REQUIREMENT: ORIGHRE9+MELS+COARSE+AND+FINE+LOCATION. ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET. DATE+ENTERED: 20362. DESCRIPTION: "NELS-DETECTED THREATS". ENTERED+RY: "JJF-NFLS". ASSOCIATES: FILE: F+13+NELS+EMISSION+THREAT+TARLF+FILE. COMPOSES: ENTITY+CLASS: FC+4+NELS+THPEAT+EC. TRACED FROME OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+THREAT+TABLE+UPDATE PEFERRED BY: SUBNET: S+3+MONEL+MELS+GPS+PROCESSING+SUR. ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET. DATE+ENTERED: 20382. DESCRIPTION: "MELS EMITTER GROUND ACTIVITY". ENTERED+8Y: "JJF-NELS". ASSOCIATES: F+14+NELS+FMITTEP+ACTIVITY+GROUND+TRUTH+FILE. FILE: COMPOSES: ENTITY+CLASS: FC+2+NELS+SCENARID+EC. TRACED FROM: OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+EYTERNAL+INTERFACE. PEFERRED BY: SHAMET: SASAMONELANELSASENSORASUR. ENTITY + TYPE: ET+3+NELS+FLIGHT+ET. DATE+ENTERED: 20382. DESCRIPTION: "FLIGHT WAYPOINTS". ENTERED+RY: "JJF-NFLS". ASSOCIATES: F+06+FLIGHT+PHCFILE+FILE FILE: FILE: F+27+PLATFORM+CONTPOL+FILE. COMPOSES: ENTITY+CLASS: FC+3+NFLS+TASKS+EC. TRACED FROM: OPIGINATING + REQUIREMENT: URIGHRERAGENERATEAR! ATFORMAMEASUREMENTS. REFERRED BY: REMET: REZEMBUELENELSESENSORESYSTEMEPENET SUBNET: SHI+CHECK+MELS+SENSOR+STATUS+SUB SUBNET: SHUFFORELFHELSFPLATFORMESUR. ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+ET. DATE+ENTERED: 20382. DESCRIPTION: MEREWHENCY TO THRE MELS TRIAD TOM. ENTEREDORY: "JUF-NELS". ASSOCIATES: FILE: F+19+NELS+FREGLENCY+SCAN+FILE. COMPOSES: ENTITY+CLASS: FC+3+NELS+TASKS+EC. TRACED FROME ORIGINATING+REQUIREMENT: OPIG+REQ+NELS+SIGNAL+OF+INTEREST.

```
REFERRED BY:
R+NET: R+2+MODFL+NELS+SENSOR+SYSTEM+R+NET.
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ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET.
DATE+ENTERED: 20382.

DESCRIPTION:

"CARRIES NELS SOI DATA TO SOI ALPHA AND HOLDS THOSE TARGETS WHICH PASS THE SUI TEST".

ENTERED+BY: "JJF-NFLS".

ASSOCIATES:

FILE: F+10+NELS+CANDIDATF+TARGETS+FILE

FILE: F+21+NELS+PRF+PRIEFEC+SOI+FILE.

COMPOSES:

ENTITY+CLASS: FC+1+NELS+PETECTABLE+EMISSION+RRFAKOUT+EC.

TRACED FROM:

ORIGINATING+REQUIREMENT: ORIG+REG+NELS+SIGNAL+OF+INTEREST.

REFERRED BY:

RENET: REZEMODELENELSESEMSORESYSTEMERENET

SUBNET: S+1+CHECK+NELS+SENSOR+STATUS+SUB

SUBNET: S+5+MODEL+MELS+SENSOR+SUB.

ENTITY+TYPE: ET+6+NELS+VFHICLE+CHARACTERISTICS+ET.

DATE+ENTERED: 20382.

DESCRIPTION: "VEHICLE EMISSION CHARACTERISTICS".

ENTERED+RY: "JJF-WELS".

ASSOCIATES:

FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE.

CUMPOSES:

ENTITY+CLASS: FC+5+NFLS+VEHICLF+CHARACTEPISTICS+EC.

TRACED FROM:

OPIGINATING+REWHIREMENT: OPIG+PEQ+NELS+EXTERNAL+INTERFACE.

REFERRED BY:

SUBNET: S+5+MODEL+NELS+SENSUR+SUR.

ENTITY+TYPE: ET+7+MELS+WEATHER+ET.

DATE+ENTFRED: 20382.

DESCRIPTION: "WEATHER INFURMATION".

ENTERED+84: "JJF=NELS".

ASSOCIATES:

FILE: F+26+NELS+WEATHER+COMDITIONS+FILE.

COMPOSES:

ENTITY+CLASS: FC+2+NFLS+SCFNARIO+EC.

TRACED FROM:

-ORIGINATING+REQUIREMENT: UPIG+RED+NELS+SIGNAL+TO+NOISE.

REFERRED 8Y:

SUBNET: S+5+MOREL+NELS+SENSUR+SUR.

ENTITY+TYPE: ET+8+NELS+PRE+HGIEFEO+401+LT.

DATE+ENTEREDI 22283.

DESCRIPTION:

"CARRIES NELS AND DATA TO AND ALPHA AND HOLDS THOSE

TARGETS WHICH PASS THE ANI TEST".

ENTERED+RY: "JDURHS".

ASSOCIATES:

FILE: F+10+NFLS+CANDIDATE+TAPGETS+FILE

FILE: F+20+NFLS+PHF+FRIEFED+401+FILE.

COMPOSES:

ENTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSTUN+BREAKOUT+EC.

```
TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.
     REFERRED BY:
          R+NET: R+2+MODEL+NFLS+SENSOR+SYSTEM+R+NET
          SUBNET: S+1+CHFCK+NELS+SENSOR+STATUS+SUB
          SUBNET: S+5+MODEL+NELS+SENSOR+SUB.
ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET.
     DATE+ENTERED: 22263.
     DESCRIPTION: "CARRIES THOSE TARGETS WHICH PARS THE S/N TEST".
     ENTERED+BY: "JDURBS".
     ASSOCIATES:
          FILF: F+10+NELS+CANDIDATE+TARGETS+FILE.
     COMPOSES:
          ENTITY+CLASS: EC+1+NFLS+DETECTABLE+EMISSTON+PREAKOUT+EC.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: ORIG+REG+NELS+EMITTER+DEFAULT.
     REFERRED BY:
                  S+5+MODEL+NELS+SENSUR+SUB.
          SHBNET:
EVENT: E+1+ACTIVATE+SENSOR+EVENT.
     DATE+ENTERED: 12082.
     DESCRIPTION: "ACTIVATES NELS SENSOR PROCESSING AND CONTROL".
     FNTERED+BY: "JJF-NELS".
     ENABLES:
          RENET: RELEMANDLE MELSES FINSOR AND GPS PROCESSING FRENET.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     REFERRED BY:
          SUBNET:
                  S+1+CHFCK+NELS+SENSOR+STATUS+SUB.
EXTENSION: X+ABBREVIATES.
     DATE+ENTERED: 52181.
     ENTERED+8Y: "B DEMONY".
     EXTENSION+DATE: 50881.
     EXTENSION+TYPE: NEW.
     JUSTIFICATION:
                " THIS RELATIONSHIP IS IMPLEMENTED TO PROVIDE A
                  TRACE BETWEEN A WORD AND ITS ABBREVIATION ".
EXTENSION: X+ARBREVIATION.
     DATE+ENTERED: 52181.
     ENTERED+RY: "B DEMOCY".
     EXAMPLE:
           ARBREVIATION VAL
              ASSREVIATES.
                WORD VALIDATE
     EXTENSION+DATE: 50881.
     EXTENSION+TYPE: NEW.
     JUSTIFICATION:
                " THIS PROVIDES THE CAPABILITIES TO MAINTAIN A LIST
                  OF ABBREVIATIONS CURPENTLY REING USED ".
EXTENSION: X+ASET+MSG.
     DATE+ENTERED: 52181.
```

ENTERED+BY: "8 DEMONY".

* ASET+MSG SENSOR+POSITION

EXAMPLE:

SAME+AS

MESSAGE SENSOR+CNE+POSITION ".

EXTENSION+DATE: 50881. EXTENSION+TYPE: NEW.

JUSTIFICATION:

" IT IS NECESSARY TO ESTARLISH A SEPARATION BETWEEN MESSAGES IN A PACKET AND MESSAGES IDENTIFIED AS SINGLE ".

EXTENSION: X+DATE+ENTERED.

DATE+ENTERED: 52281.

ENTERED+BY: "B DEMUNY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" A TIME SEPARATOR WHICH WILL ALLOW THE GENERATION OF REPORTS BY DATE FOR TIME STUDIES AS WELL AS OTHER MANAGERIAL REPORTS ".

EXTENSION: X+EXAMPLE.

DATE+ENTERED: 52181.

ENTERED+RY: "B DEMONY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFTCATION:

" ALLOWS AN AREA WHICH INDICATES THE PROPER USE OF THE LANGUAGE EXTENSION ".

EXTENSION: X+EXTENSION.

DATE+ENTERED: 52181.

ENTERED+RY: "B DEMONY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" THIS CONCPT WAS DEVELOPED TO MAINTAIN THE DOCUMENTATION ON LANGUAGE EXTENSIONS ".

EXTENSION: X+EXTENSION+DATE,

DATE+ENTERED: 52181.

FNTEPED+RY: "B DEMODY".

EXTENSION+DATE: 50881.

FXTENSION+TYPE: NEW.

JUSTIFTCATION:

" TO DOCUMENT THE DATE ON WHICH AN EXTENSION TO THE LANGUAGE WAS PERFORMED ".

EXTENSION: X+EXTENSION+TYPE.

DATE+ENTERED: 52181.

FNTERED+RY: "B DE 400Y".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

TO INDICATE WHETHER A PARTICULAR LANGUAGE EXTENSION IS A NEW DEFINITION OR A MODIFICATION *.

EXTENSION: X+FORMS.

DATE+ENTEREU: 52181.
ENTERED+RY: "8 DEMUCY".

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EXAMPLE:
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* ALPHA PROCESS+SENSOFS

FORMS

MSG+PACKET SENSTR+INFO ".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: REPLACEMENT.

JUSTIFICATION:

" IT IS NECESSARY TO ALLOW ALPHAS TO FORM MESSAGE PACKETS AS WELL AS MESSAGES ".

EXTENSION: X+JUSTIFICATION.
DATE+ENTERED: 52181.

ENTERED+BY: "R DEMONY".

FXTENSION+PATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" TO CREATE AN AREA IN WHI A JUSTIFICATION OF THE FXTENSION CAN BE DOCUMEN. > ".

EXTENSION: X+MAKES.

DATE+ENTERED: 52181.

ENTERED+RY: "B DEMONY".

EXAMPLE:

" MSG+PACKET SENSOR+PCKT

MADEARY

ASETHMSG SEMSOR+STATUS

ASET+MSG SENSOR+POSITION "

EXTENSION+DATE: 50881.

EXTENSION+TYPE: REPLACEMENT.

JUSTIFICATION:

" FOR THE PURPOSES OF TRACEABILITY RETWEEN A MESSAGE PACKET AND ITS MESSAGES, IT IS NECESSARY TO HAVE A RELATIONSHIP IN WHICH A GROUP OF MESSAGES MAKE A PACKET ".

EXTENSION: X+MSG+PACKET.

DATE+ENTERED: 52181.

ENTEPEDORY: "B DEMUNY".

EXAMPLES

" MSG+PACKET SENSOR+PCKT

MADE PY

ASET+MSG SENSOR+POSITION

ASET+MSG SENSOR+STATUS ".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" REWUIREMENTS DOCUMENT INDICATES MESSAGE PACKETS APE SENT RETWEEN PROCESSES ".

EXTENSION: X+NAMING+CONVENTION.

DATE+ENTERED: 52281.

ENTERED+8Y: "B DEMUCY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" INDICATES THE APPROPRIATE ARBREVIATION OR IDENTIFICATION FOR AN ELEMENT NAME ".

EXTENSION: X+PASSES.

PATE+ENTERED: 52181.

ENTERED+BY: "B DEMONY".

EXAMPLE:

* OUTPUT+INTERFACE TO+SENSORS PASSES

MSG+PACKET SENSOR+INFO+TO+ASE ".

EXTENSION+DATE: 50881.
EXTENSION+TYPE: REPLACEMENT.
JUSTIFICATION:

" IT IS NFCFSSARY TO ALLOW INTERFACES TO PASS MESSAGE PACKETS AS WELL AS MESSAGES ".

EXTENSION: X+RESTRICTION.

DATE+ENTERED: 52281.

ENTERED+RY: "B DEMUOY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" IDENTIFIES ANY RESTRICTIONS PLACED ON AN ELEMENT TYPE ".

EXTENSION: X+RSL+STANDARD.

DATE+ENTERED: 52181.

FNTERED+RY: "B DEMODY".

EXAMPLE:

" RSL+STANDARD S+OUTPUT+MESSAGE NAMING+CONVENTION SUFFIX : MSG+OUT ".

EXTENSION+DATE: 50881. FXTENSION+TYPE: NEW. JUSTIFICATION:

" DUE TO THE RESTRICTION OF UNIQUENESS WITHIN THE FIRST SEVEN CHARACTERS IT IS NECESSARY TO DEVELOP STANDARDS THAT CONFORM TO THE RESTRICTION ".

EYTENSION: X+SAME+AS.

DATE+ENTERED: 52181.

FNTEPED+8Y: "B DEMONY".

EXTENSION+DATE: 50881.

EXTENSION+TYPE: NEW.

JUSTIFICATION:

" IT IS NECESSARY TO PROVIDE TRACEARILITY BETWEEN MESSAGES FROM A PACKET AND THOSE MESSAGES WHICH HAVE REEN DERIVED FROM THE PACKET MESSAGE ".

EXTENSION: X+WORD.

DATE+ENTERED: 52181.

ENTERED+8Y: "B DEMONY".

EXAMPLE:

WORD VALIDATE

ARBREVIATED BY
ARBREVIATION VAL ".

EXTENSION+DATE: 50881. EXTENSION+TYPE: NEW. JUSTIFICATION:

" THIS TYPE IS USED TO IDENTIFY A WORD THAT HAS BEEN ABBREVIATED ".

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FILE: F+01+BRIDGE+LOCATIONS+FILE.
     DESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE DATA BASE LISTING".
     CONTAINS:
          DATA:
                 D+026+RRIDGE+LOC+X+DATA
          DATA: D+027+RRIDGE+LCC+Y+DATA.
     INPUT TO:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
FILE: F+02+CARTU+UPDATE+FILE.
     DATE+ENTERED: 10882.
     DESCRIPTION: "FILE OF CAPTOGRAPHIC UPDATES".
     FNTERED+BY: "JJF-NFLS".
     CONTAINS:
          DATA: 0+029+CARTO+SECTION+NUM+DATA
          DATA: D+030+CARTO+UPCATE+1+DATA
          DATA: D+031+CARTO+UPCATE+2+DATA
          DATA: U+032+CARTO+UPDATE+3+DATA
          DATA: DEGASTOLIPOATEAX-DATA
          DATA: De034+CAPTO+UPCATE+Y+DATA.
     MAKES!
          MESSAGE: MEDZENELS+CARTD+UPDATES+MSGEIN
          MESSAGE: M+14+NELS+TFACK+MESSAGE+MSG+OUT.
     INPUT TO:
          ALPHA: A+25+HPDATE+CARTO+ALPHA.
     ORDEPED AYS
          DATA: Den29+CAPTO+SECTION+NUM+DATA.
     OUTPUT FROM:
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIGHREQHNELS+EXTERNAL+INTERFACE.
FILE: F+03+CITY+LOCATIONS+FILE.
     DESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE PATA BASE LISTING".
     CONTAINS:
          DATA: De035+CITY+LOC+x+DATA
          DATA: Den35+CITY+LOC+Y+DATA.
     INPUT TO:
          ALPHA: A+25+UPDATE+CAPTO+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
FILE: F+04+CMDRS+DATA+TO+UPDATE+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "CHMMANDERS REQUIREMENTS".
     ENTEREDORY: "JUF-NELS".
     CONTAINS:
                D+040+FIRST+CMDRS+RED+UPDATE+DATA
          DATAL
          DATA: De133+SECOND+CMD98+REQ+UPDATE+DATA.
     MAKES:
          MESSAGE: MED3+NELS+COMMANDERS+REQUIREMENTS+NSG+IN.
     INPUT TO:
          ALPHA: A-14-NEL S-PPOTESS-COMMANDERS-PEDUTREMENTS-ALPHA.
     TRACED FROM:
          OPIGINATING*REUHIPEMENT: OPIG*REG*NELS*EXTFRNAL*INTEPFACF.
```

```
FILE: F+05+FEASIBLF+ACTIVITY+AREA+FILE.
     DATE+ENTERED: 100581.
     DESCRIPTION: "CONTAINS X, Y-AXIS LOCATIONS OF FEASIBLE TARGETS".
     ENTERED+BY: "D HARTSCHUH".
     CONTAINS:
          DATA: P+143+X+LOC+FEASIBLE+DATA
          DATA: D+145+Y+LOC+FEASIBLE+DATA.
     MAKESI
          MESSAGE: M+04+NELS+MCDIFIED+TASK+MSG+IN
          MESSAGE: M+OR+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
     INPUT TO:
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA:
          A+15+NELS+PROCESS+PPICRITIZED+SENSUR+DIRECTIONS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+PEQ+FEASIBLE+CHECK
          OPIGINATING+REQUIREMENT: OPIG+REQ+SENSOR+FFASIBILITY.
FILE: F+06+FLIGHT+PROFILF+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "FLIGHT WAYPOINTS FILE".
     ENTERED+BY: "JJF-NFLS".
     CONTAINS:
                 Den41eFLJGHTeWAYPOINTeXeDATA
          DATA:
                 D+042+FLIGHT+WAYPOINT+Y+DATA
          DATA:
          DATA: C+043+FLIGHT+WAYPOINT+Z+DATA.
     ASSCCIATED WITH:
          ENTITY+TYPE: FT+3+MELS+FLIGHT+ET.
     INPUT TO:
          ALPHA: A+02+GENERATE+DME+ALPHA
           (* USED TO GENERATE DME *)
          ALPHA: 4+10+NELS+MODIFY+ORRIT+ALPHA
                  A+11+NELS+NODIFY+TASK+ALPHA
          ALPHA:
          ALPHA:
                  A+16+NELS+PPOCESS+REGUESTED+DATA+ALPHA
                  A+17+NELS+SENSOP+STATUS+ALPHA.
          ALPHA:
     OUTPUT FROM:
          ALPHA: A+10+NELS+MODTFY+ORBIT+ALPHA
           ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
           ALPHA: A+16+NELS+PROCESS+RFQUESTED+D4T4+ALPHA.
     TRACED FROM:
           ORIGINATING + REQUIREMENT:
           URIGHRERHGENERATE + PLATFORM + MEASUREMENTS.
FILF: F+07+GROUP+TARGET+LOCS+FILF.
     DATE+ENTEREU: 11182.
     DESCRIPTION: "PUSITION OF KNOWN GROUND TARGET(S)". ENTERED+BY: "JJF+NFLS".
     CONTAINS:
                 - D+048+GROUND+TARGET+LUC+X+DATA
           DATAL
                 D+049+GROUND+TARGET+LOC+Y+DATA.
           DATA:
     MAKES!
           MESSAGE: M+05+NELS+NON+SURVEILLANCE+TAPGET+REPORTS+MSG+UUT
           MESSAGE: MANGENELSEREQUESTEDESENSOREDATAEMSGEIN
           MESSAGE: M4124NELS4SURVEILLANCE+TAPGET4REPORTS4MSG4UUT.
      INPUT TO:
           ALPHA: A+16+NELS+PROCESS+REGUESTED+DATA+ALPHA.
      OUTPUT FROM:
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ALPHA: A+20+MELS+SURVEILLANCE+AND+THACK+MSGS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
FILE: F+08+HYPSO+DATA+FILE.
     DESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE DATA MASE LISTING".
     CONTAINS:
          DATAS
                 D+051+HYPSO+ELEV+DATA
          DATA:
                 D+052+HYPSO+LOC+X+DATA
          DATAL
                 D+053+HYPSO+LOC+Y+DATA.
     INPUT TO:
          ALPHA:
                  A+22+NELS+TERRAIN+FOLIAGE+SHADOXI'G+ALPHA
          (* USED BUT NOT UPDATED *)
          ALPHA: A+25+UPDATE+CARTQ+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTQ+ALPHA.
FILE: F+09+MARSHALLING+AREAS+FILE.
     PESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE DATA HASE LISTING".
     CONTAINS:
          DATAS
                P+054+MARSHALLING+X+DATA
          DATA: De055+MARSHALLING+Y+DATA.
     INPUT TO:
         ALPHA: A+25+UPMATE+CARTU+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
FILE: F+10+NELS+CANDIDATF+TARGETS+FILE.
     DATE+ENTERED: 11162.
     DESCRIPTION:
*NELS CANDIDATE TARGETS OUTPUT FROM THE SOI FILTER,
AND FILTER, AND S/N. THIS SAME IMPO IS FURTHER TESTED
IN THE TEPRAIN/FOLIAGE SHADOWING PROCESS BUT IS THEN
PUT IN A DIFFERENT FILE".
     ENTEREDORY: "JJF-NELS".
     CONTAINSE
          DATA: D+061+NELS+EMISSTON+DURATION+DATA
          DATA: D+062+NFLS+EMISSION+SIGNAL+STRFNGTH+DATA
                - 0+063+NELS+EMISSION+START+TIME+DATA
          DATA:
          DATAS
                D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
          DATA:
                 Den75+HELS+EHITTER+IN+DATA
          DATA:
                 D+016+hELS+EMITTER+LOCATION+DATA
          DATA:
                 D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          DATA:
                 P+130+SCFNARIO+GEN+ID+NUM+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+10+GROUND+SHADDWING+CAMDIDATF+TARGETS+ET
          ENTITY+TYPE: ET+5+HELS+PRE+BRIFFEO+SOI+ET
          ENTITY+TYPE: ET+8+NELS+PRE+BRIFFED+AMI+ET
          ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET.
     INPUT TO:
          ALPHA: A+05+NELS+ARE4+OF+INTEREST+FILTER+ALPHA
                  A+19+MFI S+SIGNAL+TO+NOISE+DETECTARILITY+ALPHA
          ALPHA:
                  A+22+NELS+TFRFAIN+FOLIAGE+SHADOWING+ALPHA.
          ALPHA:
     OUTPUT FROM:
          ALPHA: A+OS+MELS+APE&+OF+INTERFST+FILTER+ALPHA
          ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
```

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ALPHA: A+19+MEIS+SIGNAL+TO+NOISE+DFTECTABILITY+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REQ+NELS+AOI
          ORIGINATING+REGUIREMENT: ORIG+REG+NELS+THREAT+TABLE+UPDATE
FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     DATE+ENTERED: 22283.
     DESCRIPTION:
THIS FILE CONTAINS THAT INFORMATION OF AN EMISSION
 WHICH HAS PASSED THE FOLLOWING TESTS: SOI, AOI,
 S/N, AND GROUND SHADOWING. THIS FILE WAS
CREATED FOR A MORE READABLE FORM".
     ENTERED+BY: "JOURBS".
     CONTAINS:
          DATA:
                 D+147+NELS+EMISSION+DURATION+DATA
          DATA:
                 D+14A+NELS+EMISSION+SIGNAL+STRENGTH+DATA
                 D+149+NELS+EMISSION+START+TIME+DATA
          DATA:
          DATAS
                 D+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
          DATAL
                 D+151+NELS+EMITTER+ID+DATA
          DATAL
                 D+152+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          DATAS
                 D+153+NELS+EMITTER+X+DATA
                 D+154+NEL S+EMITTER+Y+DATA
          DATA:
          DATA:
                 D+155+NELS+EMITTER+Z+DATA
          DATA:
                -D+156+SCENARIO4GEN+ID+NUM+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET.
     INPUT TO:
          ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA.
     OUTPUT FROM:
          ALPHA: A+22+NELS+TFRRAIN+FOLIAGE+SHADOWING+ALPHA.
FILE: F+13+NELS+EMISSION+THREAT+TABLE+FILE.
     DATE+ENTERED: 11282.
     DESCRIPTION: "FILE OF DETECTED EMITTERS ".
     ENTERED+RY: "JJF=NELS".
     CONTAINS:
                D+065+NELS+EMISSION+THREAT+TABLE+DATA.
          DATA:
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET.
     INPUT TO:
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+23+NELS+THREAT+TABLE+UPDATE+ALPHA.
     ORDERED BY:
          DATA: D+079+NELS+EMITTER+TIME+DF+LOCATION+DATA.
     OUTPUT FROM:
          ALPHA: A+23+NELS+THREAT+TABLE+UPDATE+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+THREAT+TABLE+UPDATE
FILE: F+14+NELS+FMTTTEP+ACTIVITY+GROUND+TRUTH+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "NELS SCENAPIC DATA".
     ENTERED+RY: "JJF-NELS".
     CONTAINS:
          DATA: D+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA.
     ASSOCIATED WITH:
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ENTITY+TYPE: ET+P+NELS+EMITTER+GROUND+TRUTH+ET.
     INPUT TO:
                 A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          AL PHA:
          (* USED BUT NOT UPDATED *).
     ORDERED BY:
          DATA:
                De075+8+NELS+EMITTER+ID+DATA.
     OUTPUT FROM:
          ALPHA:
                 A+04+INTTTAL I7E+NELS+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
FILF: F+15+NELS+EMITTER+CHARACTERISTICS+FILE.
     PATE+ENTERED: 11182.
     DESCRIPTION: "MELS EMITTER CHARACTERISTICS TABLE".
     FNTERED+RY: "JJF+NELS".
     CONTAINS:
          DATA: D+069+NEI S+EMITTER+CHARACTERISTICS+DATA.
     ASSUCIATED WITH:
          ENTITY+TYPE: ET+6+MELS+VEHICLE+CHARACTERTSTICS+ET.
     INPUT TO:
          ALPHA: A+1A+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          (* USED BUT NOT UPDATED *).
     CUTPUT FROM:
          ALPHA: A+04+INITIALIZE+NELS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REQ+NELS+EXTERNAL+INTERFACE.
FILE: F+16+NELS+EMITTER+FILE.
     DATE+ENTERED: 102781.
     DESCRIPTION: MFILE OF MELS-DETECTABLE FMITTERS".
     ENTERED+RY: "JJF-ES".
     CONTAINS:
          DATA: 0+071+NELS+EMITTER+DATA.
     MAKES!
          MESSAGE: M+01+ES+NELS+UNTT+AND+ENVIRONMENT+DATA+MSG+IN.
     INPUT TO:
          ALPHA:
                 - A+O4+TNTTTALI7E+NELS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+SCENARIO+TIMING.
FILF: F+17+NFLS+ESTIMATEN+FMITTER+PARAMETERS+FILF.
     PATE+ENTERED: 11282.
     DESCRIPTION:
     "FILE OF PAPAMETERS ESTIMATED BY TARGET ACQUISITION".
     ENTERED+RY: "JJF-NELS".
     CONTAINS:
          DATA: D+08R+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+11+DFTECTED+EMISSIONS+DD+TDOA+ET
          ENTITY+TYPE: ET+12+0FTECTED+EMTSSIONS+COARSE+ET
          ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+ET.
     INFUT TO:
                  A+05+NELS+CCARSE+LOCATION+ALPHA
          ALFHA:
          AL PHA:
                  A+07+NELS+FINF+LOCATION+ALPHA
                 AGURGNELSGFREGUENCY-SCANGOPTIMIZATIONGALPHA
          ALPHA:
          ALPHA: A+12+NELS+PF#FOPM+SIGNATUPE+ANALYSIS+ALPHA.
     OUTPUT FROM:
          ALPHA: 4+U7+MELS+FINF+LOCATION+ALPHA
```

```
ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+TARGET+ACQUISITION.
FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
     DATE+ENTERED: 11262.
     DESCRIPTION:
             *FILE OF ESTIMATED GROUND LOCATIONS OF NELS
   DETECTABLE EMITTERS".
     FNTERED+BY: "JJF-NFLS".
     CUNTAINS
          DATA:
                 PARENNEL SAESTIMATEDAGROUNDATRUTHADATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+11+DETECTED+EMISSIONS+DD+TD0A+ET
ENTITY+TYPE: ET+12+DETECTED+EMISSIONS+COARSE+ET
ENTITY+TYPE: ET+13+DFTECTED+EMISSIONS+FIME+ET.
     INFUT TO:
          ALPHA:
                 A+1)6+NELS+CHAPSF+LPCATINH+ALPHA
          ALPHA: A-07+NELS+FINF+LOCATION+ALPHA
           ALPHA: A+12+NELS+PFRFOPM+SIGNATHRE+AMALYSIS+ALPHA.
     CUTPUT FROM:
          ALPHA: A+JK+NELS+COARSE+LUCATION+ALPHA
          ALPHA: A+07+ VELS+FINE+LOCATION+ALPHA
          ALPHA: A+21+HEIS+TARGET+ACOUTSITION+ALPHA.
     TRACED FROM:
          ORIGINATING+HEQUIPEMENT: OPIG+REG+NELS+TARGET+4CQUISTTION.
FILE: FA19+NFLS+FRFQUENCY+SCAN+FTLF.
     DATE+ENTERED: 11182.
     DESCRIPTION:
              THE SET OF FRENMETCY SCAN MANGES TO HE SEARCHED
   AY THE NELS".
     ENTERED+BY: "JJF-NELS".
     CONTAINS:
          DATA: Denger NEL SEFREGUENCY+SCAMERANDEDATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ETHANNELS+FREDUFNCY+SCAN+FT.
     INPUT TU:
          ALPHAS
          A+15+NELS+PPUCESS+PPICRTTIZED+SFNSUR+DIRECTIONS+ALPHA.
     OUTPUT FROM:
          ALPHA:
          A+15+MELS+PROCESS+PPICRITIZEO+SENSOR+DIPECTIONS+ALPHA.
     TRACED FROM:
          URIGINATING+REUNIPEMENT: ORIG+REG+NELS+SIGNAL+OF+INTEREST.
FILE: F+20+NELS+PRE+BHIEFED+AUI+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION:
     "CONTAINS NELS FILTERING CRITERIA FOR EACH SFARCH ARFA".
     ENTEPED+RY: "JUF-NELS".
     CONTAINS:
          DATA: De094+NELS+PRE+URIEFFD+ADI+DATA.
     ASSOCIATED WITHE
          ENTITY+TYPE: ET+8+KELS+PRE+HRIFFFD+ADI+ET.
     INPUT TO:
           ALPHA: AGOSONEL SOAFEAOFFINTERESTOFILTERGALPHA
           ALPHA: A+14+NELS+PFOCESS+COMMANDERS+REQUIREMENTS+ALPHA
```

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ALPHA: A+17+MELS+SENSOR+STATUS+ALPHA.
     NUTPUT FROM:
          ALPHA: A+14+NELS+PROCESS+COMMANDERS+REQUIREMENTS+ALPHA.
     THACED FROM:
          ORIGINATING+REGUIREMENT: URIG+PEQ+NELS+AOI.
FILE: F+21+NFLS+PRF+BRIEFED+SOT+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "FILE UF RANGES OF FREQUENCIES OF INTEREST".
     FNTERED+PY: "JJF-NELS".
     CONTAINS:
          DATA: D+102+NELS+PRE+BRIFFED+SOI+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+5+NELS+PRE+BRIFFED+SOI+LT.
     INPUT TO:
          ALPHA: A+14+NELS+PPOCESS+COMMANDERS+REGUIREMENTS+ALPHA
                  A+17+NELS+SFNSOR+STATUS+ALPHA
          ALPHA:
          AL PHA:
                  A+1R+NELS+SIGNAL+OF+INTEREST+FILTFR+ALPHA.
     DUTPUT FROM:
          ALPHA: A+14+NELS+PROCESS+COMMANDERS+REGUTHEMENTS+ALPMA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: UPIG+REQ+NELS+STGMAL+OF+INTFREST.
FILE: F+24+NELS+TUDA+DD+FILE.
     DATE + ENTERED: 11282.
     DESCRIPTION:
             "FILE OF TIME DIFFFRENCE OF ARRIVAL (TOUA) AND
   DIFFERENTIAL DOPPLER (DD) MEASUREMENTS RELATIVE TO EACH
   NELS SENSUR PLATFORM".
     FNTEREDERY: "JJF-NELS".
     CUNTAINS:
          DATA: DellaeneLS+Troa+no+pata.
     INPUT TO:
          ALPHA:
                 -A+06+HELS+CCARSE+LUCATION+ALPHA.
     OUTPUT FROM:
          ALPHA: A+21+MELS+TARGET+ACOUISITIOM+ALPHA.
     TRACED FROM:
          UPIGINATING+REQUIPEMENT: ORIGHRED+NELS+TARGET+ACQUISITION.
FILE: F+25+NELS+TYPED+EMTTTEP+REPORT+FILE.
     DATE+ENTERED: 11287.
     DESCRIPTION: "FILE OF TYPED EMITTER REPORTS".
     ENTEREDORY: "JJF-NELS".
     CONTAINS:
          DATA: D+113+NELS+TYPED+E"ITTER+REPORT+DATA.
     INPUT TO:
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA
          ALPHA: A+23+MEI S+THREAT+TARLE+UPPATE+ALPHA.
     QUIPUT FROM:
          ALPHA: A+12+NELS+PFRFOPM+SIGNATURE+ANALYSIS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNATURE+AMALYSIS.
FILE: F+264NELS+MEATHER+COMDITIONS+FILE.
     DATE+ENTERED: 11162.
     DESCRIPTION: "Y=Y-ALTITUTE ORDERED WEATHER DATA".
     FNTERED+BY: "JJF-NELS".
     CUNTAINS:
```

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D+001+ALTITUDE+WEATHER+LOC+DATA
         DATAS
          DATAL
                 D+144+X+WEATHER+LOC+DATA
          DATA: D+146+Y+WEATHER+LOC+DATA.
     ASSOCIATED WITH:
         ENTITY+TYPE: ET+7+HELS+WEATHER+ET.
     INPUT TO:
          ALPHA: A+19+NELS+SIGNAL+TO+NDISE+DETECTABILITY+ALPHA
          (* USED BUT NOT UPDATED *).
     TRACED FROM!
          ORIGINATING+REQUIPEMENT: ORIGHREQ+NELS+STGNAL+TU+NOISE.
FILE: F+27+PLATFORM+CONTPOL+FILE.
     PATE+ENTERED: 11182.
     PESCRIPTION:
             "LOCATION AND DYNAMICS AT VARIOUS POINT ALONG THE
   MISSION PATH PROFILE".
     ENTERED+8Y: "JJF-NELS".
     CONTAINS:
                D+013+ASP+LOCATION+DATA
          DATA:
          DATA:
                 D+014+ASP+LOC+X+DATA
          DATAS
                 De015+ASP+LOC+Y+DATA
          DATAS
                 De016+ASP+LOC+Z+DATA
          DATA: 0+022+ASP+VEL+X+DATA
          DATAL D+023+ASP+VEL+Y+DATA
          DATA: D+024+ASP+VEL+7+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+3+NELS+FLIGHT+FT.
     INPUT TO:
          ALPHA: A+U2+GENERATE+DME+ALPHA.
     TRACED FROM:
          URIGINATING+REQUIREMENT:
          ORIGHREN+GENEPATE+PLATFORM+MEASUREMENTS.
FILE: F+28+PRIMARY+ROADS+FILE.
     DESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE DATA BASE LISTING".
     CONTAINS:
          DATAS
                 De121+PRIMARY+POADS+X+DATA
                D+122+PRIMARY+ROADS+Y+DATA.
          DATAS
     INPUT TO:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTC+ALPHA.
FILE: F+29+RAILROAD+LOCATIONS+FILE.
     DESCRIPTION:
     "FURTHER DETAILS AVAILABLE IN ASE DATA BASE LISTING".
     CONTAINS
                D+123+RATLROAD+LOC+X+DATA
          SATA:
          DATA: D+124+RATLROAD+LNC+Y+DATA.
     INPUT TO:
          ALPHAS
                 A+25+UPDATE+CARTU+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
FILE: F+30+RIVER+LOCATIONS+FILE.
     DESCRIPTION:
     "FURTHER DETAILS A"AILABLE IN ASE DATA BASE LISTING".
```

```
CONTAINS:
                 D+128+RIVER+LOC+X+DATA
          DATAL
          DATA: D+129+RIVER+LOC+Y+DATA.
     INPUT TO:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
     OUTPUT FROM:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
FILE: F+31+SFCONDARY+ROADS+FILE.
     DESCRIPTION:
     MFURTHER DETAILS AVAILABLE IN ASE DATA BASE LISTING".
     CONTAINS:
          DATA: D+131+SECONDARY+ROAD+X+DATA
          DATA: P+132+SECONDARY+ROAD+Y+DATA.
     INPUT TO:
          ALPHA: A+25+UPDATE+CARTO+ALPHA.
     OUTPUT FROM:
          ALPHA: 4+25+UPDATE+CARTO+ALPHA.
FILE: F+32+SENSUR+ORPIT+MODS+FILE.
     DATE+ENTERED: 10882.
     DESCRIPTION: "DESIRED OBSERVATION POSITION(S) FOR SENSORS".
     FNTERED+BY: "JJF+NFLS".
     CONTAINS
          DATA: Dell'TEPLATFORMEMODEXEDATA
          DATA: De118+PLATFORM+HOD+Y+DATA
          DATA: D+119+PLATFORM+MOD+Z+DATA.
     MAKES:
          MESSAGE: M+05+NELS+DRSIT+MODIFICATIONS+MSG+IN.
     INPUT TO:
          ALPHA: A+10+NELS+MODIFY+ORBIT+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE
ORIGINATING+REQUIREMENT: ORIG+REQ+SENSOR+ACTIVITY+ELEMENTS
FILE: F+33+SENSOR+PLATFORM+LOCATION+FILE.
     DATE+ENTFRED: 11182.
     DESCRIPTION: "LOCATION OF EACH SENSOR PLATFORM".
     ENTEREC+BY: "JJF-NELS".
     CONTAINS:
                 C+114+PLATFOPM+LOCATION+X+DATA
          DATAS
          DATA: D+115+PLATFGRM+LOCATION+Y+DATA
          DATA: D+116+PLATFORM+LOCATION+Z+DATA.
     MAKES!
          MESSAGE: M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     OUTPUT FROM:
          ALPHA: A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
FILE: F+34+SENSOR+STATUS+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "SENSOR STATUS".
     ENTEREC+RY: "JJF-NELS".
     CONTAINS:
          DATA: D+040+FRFGUENCY+SCAN+PARAMETER+DATA
          DATA: D+136+SENSOR+MCDE+OF+OPERATION+DATA.
```

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MAKES:
         MESSAGE: M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT.
    CUTPUT FROM:
          ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA.
    TRACED FROM:
         ORIGINATING+REQUIREMENT: ORIG+REQ+NEL8+EXTERNAL+INTERFACE.
INPUT+INTERFACE: INTO+NELS+SENSOP.
    DATE+ENTERED: 110681.
    DESCRIPTION:
             "RECFIVES MESSAGES FOR NARROWBAND EMITTER
  LOCATOR SYSTEM"
    ENTERED+RY: "JJF-NELS".
    CONNECTS TO:
          SUBSYSTEM: SS+1+REST+OF+ASE.
    PASSES:
          MESSAGE: M+01+FS+NELS+UNTT+AND+ENVIRONMENT+DATA+MSG+IN
                   M+02+NELS+CARTO+UPDATES+MSG+IN
          MESSAGE
          MESSAGE:
                   M+03+NELS+CCMMANDERS+REQUIRFMENTS+MSG+IN
                   M+04+NELS+MODIFIED+TASK+MSG+IN
          MFSSAGE:
                   M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN
          MFSSAGE:
          MESSAGE:
                   M+OR+NELS+PRIORITIZED+SENSOP+DIRECTIONS+MSG+IN
          MESSAGE: MEOGENEL SEREQUESTEDESENSOREDATAEMSGEIN
          MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN.
     TRACED FROM:
          OPIGINATING+REGNIPEMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
     PEFERHED BY:
          RENET: REZEMODELENELSESENSORESYSTEMEPENET.
MESSAGE: M+01+ES+NELS+UNIT+AND+ENVIRDNMENT+DATA+MSG+IN.
     DATE ENTERED: 110281.
     PESCRIPTION: "NELS SPENARIO".
     ENTERED+SY: "JJF-NELS".
     MADE BY:
          DATA: D+103+ASFT+MSG+ID+DATA
          FILE: F+16+NELS+EMTTTER+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+MELS+SENSOR.
     TRACED FROM:
          URIGINATING+REWHIPEMENT: ORIGEREQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+02+MELS+CARTO+UPUATES+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "UPPATES TO CARTOGRAPHIC FILE".
     ENTEPEDORY: "JJF-NELS".
     MADE BY:
          DATA:
                D+003+ASFT+MSG+ID+DATA
          FILE: F+02+CARYO+UPDATF+FILE.
     PASSED THROUGH:
          IMPOTHINTERFACE: INTO NELSO SENSOR.
     THACED FRUM!
          OPIGINATING+PEONIPEMENT: DRIG+PEO+NELS+EXTFRNAL+INTERFACE.
MESSAGE: M+03+MELS+COMMANDERS+PEDUIREMENTS+MSG+IN.
     PATE+ENTERFU: 110281.
     DESCRIPTION: "COMMANDERS REQUIREMENTS FOR SENSORS".
     FNTEPED+RY: "JIF-NFLS".
     MADE BYS
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DATA: D+003+ASET+MSG+ID+DATA
          FILE: F+04+CMDRS+DATA+TO+UPDATE+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: URIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+04+NELS+MODIFIED+TASK+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "MODIFICATIONS TO SENSOR TASKS".
     ENTERED+BY: "JJF-NELS".
     MADE BY:
                - D+003+ASET+MSG+ID+DATA
          DATAL
                 D+056+NEFDFD+FEASIBLE+DATA
          DATA:
                 P+139+TASK+WIFF+ID+DATA
          DATA:
          FILE: F+05+FEASIBLE+ACTIVITY+AREA+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTC+NELS+SEMSOR.
     TRACED FROM:
          OPIGINATING + REQUIREMENT: ORIG + REQ + NELS + EXTERNAL + INTERFACE.
MESSAGE: M+05+NELS+NON+SURVETLLANCF+TARGET+REPORTS+MSG+0UT.
     DATE+ENTERED: 110241.
     PESCRIPTION:
             "TARGETS NO LONGER UPDER SURVEILLANCE BY THE
   NELS SENSURS. (NOTE: THE FOLLOWING ITEMS ARE
   APPLICABLE TO SENSOR TYPES AS SHOWN RELUNT
                                 WELS, NELS UNLY
   GROUND+TARGET+FREQUENCY+DATA
                                   IS ONLY
   GROUND+TARGET+LEMGTH+DATA
   GROUND+TARGET+VELUCITY+DATA
                                   MTI ONLY) ".
     ENTEREDERY: "JUF-HFLS".
     FORMED HY:
          ALPHA: A+20+HEI S+SURVETELLANCE+AND+TRACK+MSGS+ALPHA.
     MADE BY:
          DATA: DECOREASETEMSGEIDEDATA
                 Den45eGPSeTueUSTA
           DATA:
                  Den46+GROUND-TARGET-FREQUENCY+DATA
           DATAS
                  THEO47+CROUND+TARGETHE ENGTHEDATA
           DATA:
                  DensoennumbetargetevelocityeData
          DATAS
                  F+07+GROUP+TARGET+LOCS+FILE.
          FILE:
      PASSED THROUGH:
           UNTPUT+INTERFACE: TOFTTMING+AND+CUBTROL+FROM+NELS.
      TRACED FROM:
           UPIGINATING+REUNIPEMENT: ORIG+PER+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+06+NELS+URBIT+NODIFTCATIONS+MSG+IN.
      DATE+ENTERED: 110201.
DESCRIPTION: "SENSOR PLATFORM ORBIT MODIFICATIONS".
      FNTERED+RY: "JJF-NFLS".
      MADE BY:
           DATA: Deco3eASFTenSGeIDecATA
                 De135+SENSOR+IT+DATA
           DATAS
           FILE: F+32+SENSOP+ORHIT+MODS+FILE.
      PASSED THROUGHE
           INPUT+INTERFACE: INTO+NELS+SENSOR.
      TRACED FROM:
           OPIGINATING+REGUIREMENT: ORIGERFOENELS+EYTERNAL+INTERFACE
           ORIGINATING+REDNIPEMENT: OPIG+REG+SEMSOR+ACTIVITY+ELFMENTS
```

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MESSAGE: M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
    DATE+ENTERED: 110281.
     DESCRIPTION: "LUCATIONS OF NFLS PLATFORMS".
     ENTERED+BY: "JJF-NELS".
     FORMED BY:
          ALPHA: A+13+NELS+PLATFORM+LUCATION+MSG+ALPHA,
     MADE BY:
                D+003+4SFT+MSG+ID+DATA
          DATA:
          FILE: F+33+SENROR+PLATFORM+LOCATION+FILE.
     PASSED THROUGH:
          OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NFLS.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+08+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
     DATE+ENTEREO: 1102A1.
DESCRIPTION: "SENSOR PRIORITIES".
     ENTERED+BY: "JJF-NELS".
     MADE BY:
          DATA: D+003+4SFT+MSG+ID+DATA
          DATA: D+056+NEFDED+FEASIBLE+DATA
          DATA: De135+SENSOR+ID+DATA
          DATA: D+137+SENSOR+PFIORITY+DATA
          FILE: F+05+FFASIBLF+ACTIVITY+AREA+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: UPIG+REG+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+09+NELS+REGUESTFO+SFNSOR+DATA+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "ASE REDUESTS FOR GATA FROM SENSORS".
     ENTERED+RY: "JJF-NELS".
     MADE BY:
          DATA: D+003+ASET+MSG+ID+DATA
          DATAL D+045+GPS+TD+DATA
          FILE: F+07+GROUP+TARGET+LOCS+FILE.
     PASSED THROUGH:
          INPUT+INTFRFACE: INTC+NELS+SENSOR.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+RED+NELS+EXTERNAL+INTEPFACF.
MESSAGE: M+10+NELS+SFNSUR+FERUESTS+MSG+UUT.
     DATE+ENTERED: 110281.
     DESCRIPTION:
             "IDLE SENSORS REQUEST TO ASE FOR SOMETHING TO
  DO".
     ENTERED+8Y: "JJF-NFLS".
     FORMED BY:
          AI PHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA.
     MADE BY:
          DATA: D+003+4SFT+MSG+ID+DATA
          DATA: 0+125+REQ+DESTINATION+SENSOR+ID+DATA
          DATA: P+126+RED+REPORT+INFORMATION+TYPE+DATA
          DATA: D+127+REQ+SEBSCR+TARGET+TD+UF+INTEREST+DATA
          DATAL U+135+SENSOR+ID+DATA.
```

PASSED THROUGH: OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE. MESSAGE: M+11+NELS+SENSOR+SYSTFM+STATUS+MSG+OUT. PATE+ENTERED: 110281. DESCRIPTION: "STATUS OF NELS PLATFORMS". ENTERED+BY: "JJF-NELS". FORMED BY: ALPHA: A+17+NELS+SENSUP+STATUS+ALPHA. MADE BY: DATA: "0+003+ASET+MSG+ID+DATA DATA: D+135+SENSOR+IC+DATA FILE: F+34+SENSOR+STATUS+FILE. PASSED THROUGH: UUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NELS. TRACED FROM: OPIGINATING+REQHIREMENT: ORIGHRED+NELS+EXTERNAL+INTERFACE. MESSAGE: M+12+NELS+SURVETLLAMCE+TARGET+REPORTS+MSG+OHT. DATE+ENTEREDI 110281. DESCRIPTION: "TARGETS CURRENTLY UNDER SURVEILLANCE BY THE MELS SENSORS. (NOTE: THE FOLLOWING ITEMS ARE APPLICABLE TO SENSOR TYPES AS SHOWN BELOW: GROUND+TARGET+FREQUENCY+DATA WELS, MELS UNLY IS ONLY GROUND+TARGET+LENGTH+DATA GROUND+TARGET+VELUCITY+DATA MTI ONLY) ". FNTERED+BY: "JJF=NFLS". FORMED BY: ALPHA: A+20+NELS+SURVETLLAMCF+AND+TRACK+MSRS+ALPHA. MADE BY: DATA: D+003+ASFT+MSG+ID+DATA DATA: 0+045+GPS+TD+DATA DATA: D+046+GROUND+T4HGET+FREQUENCY+DATA DATA: De047+GROUND+TARGET+LENGTH+DATA DATA: THOSOMORPHUNDATARGETAVELUCITYADATA FILE: F+C7+GRUUP+TARGET+LOCS+FILE. PASSED THROUGH: UUTPUT+INTERFACF: TU+TIMING+AND+CUNTROL+FROM+NELS. TRACED FRUM: ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTFRNAL+INTERFACE. MESSAGE: - M+13+YELS+TASKING+RESPONSES+MSG+OUT. DATE+ENTERED: 1102A1. DESCRIPTION: "RESPONSES TO ASE TASKS". ENTERED+BY: "JJF-NFLS". FORMED SY: ALPHA: A+11+VELS+MODJFY+TASK+ALPHA. MADE BYE DATA: 0+003+ASET+MSG+ID+DATA DATAS D+138+TASKING+RESPONSE+DATA DATA: D+139+TASK+GUE+ID+DATA DATA: 0+141+TIME+DATA. PASSED THROUGH: OUTPUT+INTERFACE: TO+TTMING+AND+CONTROL+FROM+NFLS. TRACED FROM:

ORIGINATING + REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.

MESSAGE: M+14+NELS+TRACK+MESSAGE+MSG+UUT. DATE+ENTERED: 110281.
PESCRIPTION: "TARGET TPACK MESSAGES". FNTERER+RY: "JJF-NELS". FORMED BY:

ALPHA: A+20+NEI S+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.

MADE BY:

D+003+ASET+MSG+ID+DATA DATA: D+135+SENSOP+ID+DATA DATA: D+142+TRACK+MESSAGF+DATA DATA: F+02+CARTO+UPDATE+FILE.

FILE: PASSED THROUGHE

OUTPUT+INTEPFACE: TO+TIMING+AND+CONTROL+FROM+NELS.

TRACED FROM:

OPIGINATING + REQUIREMENT: OPIG+REG+NELS+EXTERNAL+INTERFACE.

MESSAGE: M+15+T+AND+C+STOP+NFLS+MSG+IN.

DATE+ENTERED: 1102A1.
DESCRIPTION: "SIGNAL TO STOP NARROWBAND SENSORS".
FNTERED+RY: "JJF=NELS".

MADE BY:

DATA: D+003+ASET+MSG+ID+DATA.

PASSED THROUGH:

INPUT+INTERFACE: INTC+NELS+SENSOR.

TRACED FROM:

ORIGINATING+REQUIREMENT: ORIG+RED+TC+CYCLE+START.

ORIGINATING+REQUIREMENT: ORIG+PER+ALTER+SCENARIO+DFFAULTS.

DATE+ENTERED: 72481.

DESCRIPTION:

"DURING SCENARIO INITIALIZATION THERE SHALL BE THE ABILITY TO MODIFY PEFAULT VALUES OF DATA STRUCTURES SET UP DURING MODEL CONSTRUCTION". ENTERED+BY: "SGM".

DOCUMENTED BY:

SCURCE: ASE+PP+6+2+1+2.

ORIGINATING+REQUIREMENT: ORIG+REG+ASE+TASK+PRIORITY.

DATE+ENTERED: 72481.

DESCRIPTION:

*COMMANDERS REQUIREMENTS WILL BE USED TO DESIGNATE AN PRIGRITY FOR THOSE TASKS KNOWN TO BE FEASIBLE, AND THE OVERALL SITUATION (CURPENT MISSION, CORRELATED PEPORTS, AND CARTOGRAPHY FILE) WILL HE USED TO DETERMINE A PRIORITY FOR A DIFFICULT DECISION IN PRIORITIZING". ENTERED+RY: "SGM".

POCUMENTED BY:

SOURCE: ASE+PP+6+1+6.

ORIGINATING+REQUIREMENT: OPIG+REQ+AUTOMATED+TARGET+REPORTS.

DATE+ENTERED: 72781.

DESCRIPTION:

TUSE VEHICLE GROUND TRUTH DATA TO TYPE FACH CLUSTER FOR EACH ID".

ENTEREDORY: "SGM".

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DOCUMENTED BY: SOURCE: ASE+PP+6+4+1.

ORIGINATING+REQUIREMENT: OPIG+RED+RUILD+AUXILIARY+FILES.
DATE+ENTERED: 72361.
DESCRIPTION:

"AUXILIARY FILES (USFO BUT NOT UPDATED BY ASE ELEMENT) WILL BE BUILT AS DATA COMES INTO ASE ELEMENT. AUXILIARY FILES ARE MADE UP OF CARTO INFORMATION, CURRENT MISSIONS, COMMANDERS REGUIREMENTS, AND SENSOR ACTIVITY". ENTERED+BY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+1+4.

DRIGINATING+REQUIREMENT: OPIG+REQ+C3I+ASE+MSG+GENERATOR.
DATE+ENTERED: 72781.
DESCRIPTION:

"THEPE SHALL BE THE ABILITY TO FORMAT MESSAGES TO THE ASE BY PLACING MESSAGE TYPE, SOURCE CODE, DESTINATION CODE, AND PSUEDO AND REAL-TIME TIMING TAGS. THE MESSAGE HILL THEN BE TRANSMITTED TO THE ASE VIA TIMING AND CONTROL". ENTERED-BY: "SGM". DOCUMENTED BY:

SOUPCE: ASE-PP-60-44-1.

ORIGINATING+REQUIREMENT: ORIG+FEG+C31+CURRENT+PLANS.
DATE+EMTERED: 72781.

DESCRIPTION:

"THERE SHALL BE THE ABILITY TO SIMULATE CURRENT PLANS OPERATION'S REQUIRED IN THE ASET SYSTEM". FNTERED+EY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+3.

ORIGINATING+REWHIPEMENT: DRIGHREG+C3T+DATA+MANAGER.
DATE+ENTERED: 72781.

DESCRIPTION:

"THERE SHALL BE THE ABILITY TO ADD, DELETE,
AND ACESS DATA FROM THE LOCAL C31 DYOB DATA RASE".
FNTERENERY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+1.

ORIGINATING+REQUIREMENT: OPIG+REG+C3I+DATA+REQUESTS+FOR+ASE.

FATE+ENTERFD: 72761.

DESCRIPTION:

"THERE SHALL BE THE ABILITY TO GENERATE STANDING REQUESTS (VIA CONSOLE OPERATOR) FOR A SUBSET OF THE DATA MASE TO BE TRANSMITTED TO THE C31 DYOB AND TO BE AUTOMATICALLY DEPOTED BY THE ASE ELEMENT OR TO FORMULATE REQUESTS FOR SPECIFIC DATA (VIA OPERATOR OR AUTOMATICALLY) FROM ASE DATA BASE".

ENTERECHBY: "SGM".

DOCUMENTED BY:

SOURCE: ASE-PP-66-44-2.

ORIGINATING+REQUIREMENT: ORIG+PEQ+C3I+DISPLAY+REQUESTED+DATA.
DATE+ENTERED: 72781.
DESCRIPTION:

"DATA FROM CURPENT OPERATIONS OR CURRENT PLANS SHALL BE DISPLAYED BASED UN INTELLIGENCE DATA REQUESTS. THE REQUESTORS ID WILL BE DISPLAYED TO THE C3I OPERATOR".
ENTERED+RY: "SGH".
DOCUMENTED BY:
SQURCE: ASE+PP+6+4+2.

ORIGINATING+REGUIREMENT: OPIG+PER+C3T+ENVIRON+MSG+GENEPATOR.
DATE+ENTERFO: 72781.
DESCRIPTION:

"SAME AS C31+ASE+MSG+GENERATOR, BUT
MESSAGES ARE TRANSMITTED TO THE ENVIRONMENT SIMULATOR".
ENTERED+RY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+1.

ORIGINATING+REQUIREMENT: ORIG+REQ+C31+EXECUTE+STRIKE.
DATE+ENTERED: 72781.

PESCRIPTION:

"INVOKED BY FLIMINATE THREAT FUNCTION
OR BY CURRENT PLANS OPERATOR, THE EXECUTE STRIKE FUNCTION
SHALL PROVIDE A MEANS FOR FLIMINATING EITHER SENSED
TAPGETS OR CARTO FEATURES FROM SCENARIO. TARGETS SHALL
RE DEFINED BY TARGET ID OR TARGET PUSITION".
FINTEREN-BY: "SGM".
DOCUMENTED BY:

SOURCE: ASF+PP+6+4+4.

ORIGINATING+REQUIREMENT: ORIG+PEQ+C31+MODIFY+MISSIONS.
DATE+ENTERED: 72781.
DESCRIPTION:

"CALLED BY EITHER THE ELIMINATE THREAT
FUNCTION, MODIFY MISSIONS FUNCTION, OR THE CURRENT PLANS
OPERATOR. SHALL PROVIDE A MEANS FOR ALTERING CHRRENT
MISSIONS".
ENTERED+BY: "SG4".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+4.

ORIGINATING+REQUIREMENT: URIG+REQ+C3I+REQUEST+ASE+DATA.
DATE+ENTERED: 72781.
DESCRIPTION:

"OUEFY CAPABILITY SHALL PROVIDE ACCERS
TO THE ASE DATA RASE TO HELP EVALUATE INITIALIZATION
DATA".
ENTEREDERY: "SGM".
DOCUMENTED 6Y:
SOURCE: ASE+PP+6+4+3.

ORIGINATING+REUBIREMENT: OP[G+RED+C3]+REVIEW+INTELL+DATA,
DATE+ENTERED: 72781,
DESCRIPTION:
**THERE SHALL AS THE ARTISTY TO BEVIEW

THERE SHALL WE THE ABILITY TO REVIEW AND EDIT INITIALIZATION DATA AT THE CURRENT PLANS

TERMINAL".
ENTERED+BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+3.

ORIGINATING+REQUIREMENT: OPIG+REG+C3T+ROUTE+AND+FILTER.

DATE+ENTERED: 72781.

DESCRIPTION:

"EACH ASET MESSAGE ID SHALL BE EXAMINED"

"EACH ASET MESSAGE ID SHALL BE EXAMINED AND THE MESSAGE ROUTED TO THE CORECT RECEIVING TASK", ENTERED+BY: "SGM", DOCUMENTED BY:

SOURCE: ASE+PP+6+4+1.

3004651 x364614014411

ORIGINATING+REQUIREMENT: ORIG+REQ+C3I+3/REAT+ELIMINATION.

DATE+ENTERED: 72781.

DESCRIPTION:

"THE CURPENT OPERATIONS CONSOLE OPERATOR
SHALL HAVE THE ABILITY TO ALTER MISSIONS, TO AVOID A
THREAT, OR ELIMINATE A THREAT BY THE EXECUTION OF A STRIKE".
ENTERED PY: "SGM".
DOCUMENTED BY:
SOURCE: ASE PP+6+4+4.

ORIGINATING+REQUIREMENT: ORIG+REG+C31+THRE4T+EVALUATOH.
DATE+ENTERED: 72781.

DESCRIPTION:

"THE C31 THREAT EVALUATION FUNCTION
SHALL PE INVOKED BY A POTENTIAL THREAT MESSAGE (FROM
ASE FLEMENT) WHEN ACTIVITY BEYOND A CERTAIN LEVEL IS
PETECTED BY TAWDS".
ENTEPLD+BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+4+4.

ORIGINATING+REQUIREMENT: ORIG+RED+C51+THPEAT+EVAL+REACTION.
DATE+ENTERED: 72781.
DESCRIPTION:

"THE CURRENT OPERATIONS CONSOLE OPERATOR SHALL USE THE THREAT EVALUATION FUNCTION TO ALTER PLATFORM OPERATION OF THE DREIT NEFD TO BE RE-EVALUATED CONSIDERING THE NEW LEVELS OF ACTIVITY". FNTEREDORY: "SGM".

SOURCE: ASE+F++6+4+4.

ORIGINATING+REQUIREMENT: ORIG+REQ+G3I+UPDATE+CHDRS+REQUIREMENTS.
PATE+ENTFRED: 72781.
PESCRIPTION:

"THERE SHALL BE THE ABILITY FOR
THE CURRENT OPERATIONS CONSOLE OPERATOR TO CHANGE
COMMANDER'S REQUIREMENTS".
ENTEREDERY: "SOM".
DOCUMENTED BY:
SOURCE: ASE*PP+6*4*4.

ORIGINATING+REQUIREMENT: ORIGHREM+CANCELLED+TASK.

DATE+ENTERED: 72481. DESCRIPTION:

"A MODIFIED TASK MESSAGE WILL RE SENT TO THE APPROPRIATE GPS (TASKING QUE AND CUEING FILTER UPDATED FOR HIGH PRIORITY TASKS) WHEN A TASK IS CANCELLED BY AN ASE FUNCTION".
ENTERED+BY: "SGM".
DOCUMENTED BY:

SOURCE: ASE+PP+6+1+6.

ORIGINATING+REQUIPEMENT: OPIG+REQ+CONSTRUCT+CUFING+FILTER.

DATE+ENTFRED: 72381.

PESCRIPTION:

"EXTERNAL PEQUEST HANDLER SHALL CONSTRUCT THE CUEING FILTER BY ACCESSING THE THREAT TARGET ID CROSS-REFERENCE TABLE IN RESPONSE TO SENSOR REQUESTS FOR OTHER SENSOR REPORTS". ENTERED+BY: "SGM". DOCUMENTED 8Y:

SOURCE: ASE+PP+6+1+4.

ORIGINATING+REQUIREMENT: OPIG+RED+CONSTRUCT+WORLD+MODEL.
DATE+ENTERED: 72481.
DESCRIPTION:

"AS PART OF THE SCENARIO GENERATION FUNCTION, THERE SHALL BE THE APILITY TO CONSTRUCT A 'WORLD MODEL' (AN EXECUTED FORM OF THE BATTLEFIELD ENVIRONMENT AND THE UNITS IN IT) BASED ON USER SUPPLIED DESCRIPTIONS OF THE UNITS IN THE ENVIRONMENT AND THE REACTIONS OF THOSE UNITS TO USER DEFINED CHANGE IN THE ENVIRONMENT (CALLED 'DATA STRUCTURES' AND 'EVENT PROCEDURES', RESPECTIVELY)". ENTEREDERY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+2+1.

ORIGINATING+REQUIREMENT: ORIGHREG+CORPELATED+REPORT+FLEMENTS.
PATE+ENTFRED: 121491.
PESCRIPTION:

"SENSOR TARGET PEPORTS AND SUMMARY INFORMATION

(GROUP ATTRIBUTES, GROUP CENTRUIN FORITIONS, AND VELOCITY DATA",

ENTERED #34: "D HARTSCHUH",

DOCUMENTED #4:

SOURCE: ASE#PP#6#1#7.

ORIGINATING+REQUIPEMENT: OPIG+REQ+CORRELATION+CENTER+UPDATF+HANDLER.
DATE+ENTERED: 72381.
DESCRIPTION:

"STORE UPDATES TO CORRELATION CENTER AND SEND OUT ANY DATA REQUESTED BY C31 AND ASE ON A STANDING BASIS". FNTERED-RY: "SGM". DOCUMENTED BY: SOURCE: ASE+PP+6+1+4.

ORIGINATING+REQUIREMENT: ORIG+REQ+CORRELATION+UPDATE.
DATE+ENTERED: 72361.

PESCRIPTION:

"CORRELATED FILE IS TO UPDATE GROUP POSITIONS
AT THE TIME OF THE REPORT".

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FNTEREDARY: "SGM".

DOCUMENTED BY:

SOUPCE: ASF+PP+6+1+3.

ORIGINATING+REQUIPEMENT:

ORIG+REQ+CUFING+FILTER+AGAINST+SURVFILL+REPORTS.

PATE+ENTERED: 62981.

DESCRIPTION:

"NON-SHRVETLLANCE TARGET REPORTS WILL BE CHECKED AGAIN THE CUEING FILTER TO DETERMINE WHICH REPORTS ARE TO BE SENT TO ANOTHER SENSOR". ENTEREMENT: "SGM".
DOCUMENTED BY:

SOURCE: ASE+PP+6+1+2.

ORIGINATING+REQUIREMENT: ORIG+PER+DIRECTING+SENSORS.
DATE+ENTERED: 72381.
DESCRIPTION:

"DIRECT SEMSORS TO CHECK FREQUENCIES AND AREAS
FOR MISSING ELFMENTS BASED ON KNOWLEDGE OF RED MILITARY
FOCTRINE".
FNTERED#RY: "SGM".
FOCUMENTED BY:
SOURCE: ASE#P#46+1+3.

ORIGINATING+REQUIREMENT: ORIG+RED+DISTRIBUTED+REPORTS.

DATE+ENTERED: 72381.

DESCRIPTION:

#REPORTS ARE TO BE DISTRIBUTED TO THE

"REPORTS ARE TO BE DISTRIBUTED TO THE APPROPRIATE SENSOR GPS AND TO CORRELATION".
ENTEREPHRY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+1+2.

OPIGINATING+REQUIREMENT:
DRIG+RED+DYNAMIC+SITUATION+PRIORITY+ASSESSMENT.
DATE+ENTERED: 72381.

DESCRIPTION:

"IDENTIFY HIGH PRIDRITY TARGETS USING INPUTS
FROM SPECIAL TARGET ANALYSIS, AUTO THREAT ANALYSIS,
AND COMMANDERS REQUIREMENTS".
ENTERENHAY: "SGM".
DOCUMENTED BY:
SPURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+EMITTER+CHARACTERISTICS+UPDATE,
DATE+ENTERED: 72381,
DESCRIPTION:

"THE EMITTER CHARACTERISTRICS FILE SHALL BE
UPDATED USING IDENTIFIED NETWORKS".

"THE EMITTER CHARACTERISTRICS FILE SHALL BE UPDATED USING IDENTIFIED NETWORKS". FNTERED#RY: "SGM".
DOCUMENTED BY:
SQURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+EMITTER+LOCATION+ACCURACY.

DATE+ENTERED: 72781.

DESCRIPTION:

#TO BE MODELLED AS A FUNCTION OF EMITTER

FREQUENCY, BANDWIDTH, S/N, HARDWARE ERRORS, NAV. EPRORS, SENSOR PLATFORM GEOMETRY, PHASE NOISE AND CO-CHANNEL INTERFERENCE, AND CORRELATION DWELL TIME".

ENTERED+RY: "SGM".

TRACES TO:

ALPHA: A+06+NELS+CDARSE+LOCATION+ALPHA ALPHA: A+07+NELS+FINE+LOCATION+ALPHA. DOCUMENTED BY:

SOURCE: ASE+PP+6+3+2+3.

ORIGINATING+REQUIPEMENT: CRIG+PER+ENEMY+FORCE+RUILD.
DATE+ENTERED: 72481.

DESCRIPTION:

"CALCULATIONS OF BUILD UPS IN FNEMY FORCE CONCENTRATIONS WILL PE DONE USING SURVEILLANCE AND TIME COMPRESSED CORRELATED SENSOR REPORTS, AND ISSUE POTENTIAL THREAT REPORTS TO THE C31".
FNTERED+BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+ES+DATA+INPUT.
DATE+ENTERED: 72481.
DESCRIPTION:

"A DISPLAY TERMINAL WILL PROVIDE THE DATA FROM THE SCENARIO GROUND TRUTH, WHICH WILL ALLOW THE IS OPERATOR TO SELECT INFORMATION REQUIRED BY THE EXPERIMENT DESIGN. THIS INFORMATION SHALL BE AUTOMATICALLY FORMATTED INTO PHOTOINT, HUMANINT, AND SIGNINT REPORTS AND FORWARDED TO THE APPROPRIATE ASE ELEMENT FOR INCLUSION INTO THE OYOR". ENTERED+8Y: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+2+2.

OPIGINATING+REQUIPEMENT: OPIG+REQ+EXPERIMENT+INITIALIZATION,
DATE+ENTERED: 72481,
DESCRIPTION:

"THE EXPERIMENT INITIALIZATION FUNCTION (IT INCLUDE COMMANDERS REQUIREMENTS, SENSOR ACTIVITY, AND CUFRENT MISSIONS) SHALL RE PERFORMED WHEN INDICATED BY TIMING AND CONTROL". ENTEREN+BY: "SGM".
DOCUME: TFD BY:

SOURCE: ASE+PP+6+2+3.

OPIGINATING+REMUIPEMENT: ORIGHPEN+EXTERNAL+REQUEST+REFORMATTING.
DATE+ENTERED: 72381.

DESCRIPTION:

"CORRELATION CENTER PESPONDS TO C31 REQUEST DATA BY REFORMATTING INFORMATION INTO A REPORT AND FORWARDING THE REPORT TO THE C31".
ENTEREDERY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+1+4.

ORIGINATING+REQUIREMENT: OPIG+REQ+FEASIBLE+CHECK.
DATE+ENTFRED: 72481.

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DESCRIPTION:
               "WITH 4 FEASIBLE TASK A CHECK IS MADE TO
     DETERMINE IF THE SENSOR HAS RESPONDED TO A SIMILAR
     REQUEST. IF NO SIMILAR REQUEST THEN TASK IS TO BE
     PRIOPITIZED".
     ENTERED+8Y: "SGM".
     TRACES TO:
          FILE: F+05+FEARIFLE+ACTIVITY+ARE4+FILE.
     DOCUMENTED BY:
          SOURCE: ASE+PP+6+1+6.
ORIGINATING+REGUIREMENT: ORIGHRED+GENERATE+DME.
     PATE+ENTERED: 72481.
     DESCRIPTIONS
               MITHE SENSOR PLATFORM LOCATION(X,Y,Z,)
     AND DYNAMICS (SPEED & ACCELERATION) WILL BE GIVEN AT
     KEY POINTS ALONG THE MISSION FLIGHT PATH".
     FNTERED+BY: "SGM".
     TRACES TO:
          ALPHA: A+02+GENE9ATE+DME+ALPHA
          DATA: D+014+ASP+LUC+X+DATA
          DATA: DE015+45P+LOC+Y+DATA
          DATA: P+016+4SP+LOC+Z+DATA
          DATA: Denzneaspestatfevectorepata
          UATA: D+021+ASP+TIME+UATA
          DATA: C+022+ASP+VEL+X+DATA
          DATA: DE023+ASP+VEL+Y+DATA
          DATA: D+024+ASP+VEL+7+DATA
          SUBMET: Se4+"ONEL+MELS+PLATFOR"+SUB.
     DUCUMENTED SY:
          SOURCE: ASE+PP+6+3+1+1.
ORIGINATING+REQUIREMENT: OPIC+RED+GENERATE+INS.
     DATE+ENTERFU: 72461.
     DESCRIPTION:
               "CAPTESIAN-TO-GECGRAPHICAL CONVERSION
     IS TO BE APPLIFU TO THE LIME VALUES TO OBTAIN THE Y,Y,7, OF THE PLATFURM; FITH BOLL, PITCH, AND YAM
     MODELLED USING VECTOR RESULTANTS OF CENTRIPETAL AND
     GRAVITATIONAL FORCES".
     ENTERED+RY: "SGM".
     TRACES TO:
          ALPHA: A+03+GENEPATE+INS+ALPHA
          DATA: P+010+4SF+ALTITUPE+DATA
          DATA: D+011+ASP+ATTITUDE+DATA
          DATA: U+012+ASP+LATITUPE+DATA
          DATA: P+013+ASP+LOCATION+DATA
          DATA: i'+017+4SP+LutGTTUDE+DATA
          DATA: D+018+ASP+PITCH+DATA
          DATA: C+C19+ASP+ROLL+DATA
          DATA: D+025+ASP+YAW+CATA
          SUBNET: S+4+MODEL+ ELS+PLATFORM+SUB.
     DOCUMENTED BY:
          SOURCE: ASF+PP+6+3+1+1.
ORIGINATING+REQUIREMENT: OPIC+REG+GENEPATE+INTELL+REPORTS.
     DATE+ENTERED: 72481.
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DESCRIPTION:

"INTELLIGENCE PEPORTS SHALL BE AUTOMATICALLY GENERATED ACCORDING TO A PRE-SELECTED SCHEDULE BASED UPON EVENTS OCCURING WITHIN THE SCENARIO". ENTERED+BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+2+2.

ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+NOISE.
DATE+ENTERED: 72481.
DESCRIPTION:

"ERRORS IN THE SENSOR PLATFORM DME
IS ASSUMEND TO BE GAUSSIAN DISTRIBUTED WITH A MEAN
CONSTANT, AND THE 'INS MEASUREMENTS ARE ASSUMED TO BE
ZERO MEAN GAUSSIAN DISTRIBUTED".
ENTERED+BY: "SGM".
TRACES TO:

ALPHA: A+01+DMF+TNS+NDISE+GENERATION+ALPHA SUBNET: S+4+MODEL+NELS+PLATFORM+SUB. DOCUMENTED BY: SOURCE: 45E+PP+6+3+1+1.

ORIGINATING+REQUIREMENT: ORIG+RED+GENERATE+PLATFORM+MEASUREMENTS.
TRACES TO:

ALPHA: A+02+GENERATE+DME+ALPHA

DATA: D+006+ASP+ACCELERATION+DATA

DATA: D+007+ASP+ACCELERATION+DATA

DATA: D+008+ASP+ACC+X+DATA

DATA: D+009+ASP+ACC+Z+DATA

UATA: D+041+FLIGHI+WAYPOINT+X+DATA

DATA: D+042+FLIGHI+WAYPOINT+Y+DATA

DATA: D+043+FLIGHI+WAYPOINT+Z+DATA

ENTITY+CLASS: FC+3+NELS+TASKS+EC

ENTITY+TYPE: ET+3+NELS+FLIGHT+ET

FILE: F+06+FLIGHT+PROFTLE+FILE

FTLE: F+27+PLATFORM+CONTROL+FILE

ORIGINATING+REQUIREMENT: OPIG+REQ+RENERATE+SUB+IMAGL+STATS.
OATE+ENTERED: 72781.
PESCRIPTION:

SUBNET: S+4+MODEL+NELS+PLATFORM+SUR.

"GENERATES SUB-IMAGE PARAMETERS FROM POTENTIAL DETECTIONS, AREA(S) OF CHANGE, AND DATA FROM THE REFLECTIVITY AND TARGET FILES. THESE SUB-IMAGE PARAMETERS CONTAIN THE INFORMATION NEEDED TO GENERATE STATISTICALLY REPRESENTATIVE IMAGE(S) OF THE GROUND AREA(S) OF CHANGE".
ENTEREDERY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+5+2.

ORIGINATING+REQUIREMENT: DRIGHPED+INFEASIBLE+TASK+NOTIFICATION.

DATE+ENTERED: 72481.

DESCRIPTION:

"IN THE FVENT A TASK IS INFEASIBLE, THE SENSOR

AVAILABILITY FUNCTION: NOTIFIES THE TASKING RESPONSE

HANDLER".

ENTERED+BY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+1+6.

ORIGINATING+REQUIREMENT: ORIG+RED+INTERACTIVE+TARGET+REPORTS. DATE+ENTERED: 72781. DESCRIPTION:

"USE SUB-IMAGE PARAMETERS TO GENERATE AN IMAGE OF THE AREA; THE AMALYST CLASSIFIES THE CLUSTER ACCORDING TO THE TARGET TYPE". ENTERED+BY: "SGM". DOCUMENTED BY:

SOURCE: ASE+PP+6+3+4+3.

ORIGINATING+REQUIREMENT: ORIG+REQ+IS+CHANGF+DETECTION+ACTIVITY. DATE+ENTERED: 72781. DESCRIPTION:

"USE SUB-IMAGE PARAMETERS TO DETERMINE IF ANY CHANGE DETECTION(CD) REPORTS ARE TO BE ISSUED CHACKGROUND-TO-NOISE RATIO AND TARGET-TO-HACKGROUND RATIOS ARE USED TO DETERMINE PIXEL CHANGE EVENTS)". ENTERED+RY: "SGM". DOCUMENTED BY:

SOURCE: ASE+PP+6+3+4+3.

ORIGINATING+REQUIREMENT: ORIG+RFN+1S+CLUSTERING+ACTIVITY. DATE+ENTERED: 72781. DESCRIPTION:

"CLUSTER CHANGE DETECTION PIXELS AND MTI DETECTIONS, CALCULATE CENTER OF EACH CLUSTER, AND ISSUE CHANGE OFTECTION REPORTS ON EACH CLUSTER. CHANGE DETECTION REPORTS INCLUDES NUMBER OF PIXELS IN A CLUSTER, CLUSTER LOCATION CENTER, AND TIME OF EVENT. USED TO UPDATE IS GROUND ORDER OF BATTLE FILE". ENTERED+RY: "SGM". DOCUMENTED BY: SOURCE: ASE+PP+6+3+4+3.

ORIGINATING+REQUIREMENT: ORIC+REQ+IS+RANDOM+NOTSF. DATE+ENTERED: 72781.

DESCRIPTION:

"GENERATE NOISE PARAMETER FOR

EACH SCENE". ENTERED+8Y: "SGM". DOCUMENTED BY:

SOURCE: ASE+PP+6+3+4+2+3.

OPIGINATING+REQUIREMENT: UPIG+REQ+IS+SENSOR+CONTROL. DATE+ENTERED: 72781. DESCRIPTIUN:

"SENSOP TASKS FROM THE ASE FLEMENT AND THE C31 REQUIREMENTS FOR SENSORS ARE TRANSFORMED INTO PLAT-FORM CONTROL AND SENSOR CUNTROL. CARTO UPDATES ARE STORED IN THE CARTO FILE AND SCENARIO DATA IS STURED IN THE VEHICLE GROUND TRUTH FILE". FNTERED+BY: "SGM". DOCUMENTED BY:

SOURCE: ASE+PP+6+3+4+3.

GRIGINATING+REQUIREMENT: UPIC+PER+IS+THREAT+TAPGET.

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DATE+ENTERED: 72781. DESCRIPTION:

"ANALYZE SUB-IMAGES CENTERED AROUT CD CLUSTER CENTERS TO IDENTIFY TARGETS FOR THREAT TARGET REPORTS; THESE REPORTS (# OF TAPGETS, CENTROID LOCATION SIZE OF GROUP, TARGET CLASSIFICATION, PATTERN OF FORMATION, AND TIME OF EVENT) CAN BE GENERATED AUTOMATICALLY OR INTERACTIVELY".
ENTERED-BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+3+4+3.

ORIGINATING+REQUIREMENT: ORIG+REQ+LIMITING+LOCATOR+REPORTS.
DATE+ENTERED: 72381.

DESCRIPTION:

"THE NUMBER OF EMITTER LOCATOR REPORTS CAN BE LIMITED BY REQUESTING ONLY THOSE REPORTS WITHIN A CEPTAIN GEOGRAPHICAL AREA". ENTERED+BY: "SGM".

DOCUMENTED BY:

SQURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+MODIFIED+MISSION+COMPARISON.
DATE+ENTERED: 72381.

DESCRIPTION:

"COMPARE ALL MISSION MODIFICATIONS AGAINST ALL KNOWN ADU'S FOR POSSIBLE MISSION THREAT REPORTS".
ENTERED+BY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+MOVING+ADU+CHECK.
DATE+ENTERED: 72381.
DESCRIPTION:

"LOCATION CHECK OF ALL KNOWN MOVING ADU'S WILL

BE DONE AT SET TIME INTERVALS (WHETHER OR NOT THEY ARE

ISSUING EMITTER REPORTS".

ENTERED+BY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+PEG+MTI+FADAR+BEAM+COVERAGE.

DATE+ENTERED: 72481.

DESCRIPTION:

"INTERPRET RADAR BEAM STEERING COMMANDS AND DETERMINE GROUND AREA OF COVERAGE; WHICH CAN BE DONE FOR EITHER AN INDIVIDUAL BEAM OR A RADAR SECTOR SCAN".
ENTERED+BY: "SGM".
DOCUMENTED BY:

SOURCE: ASE+PP+6+3+1+2.

ORIGINATING+REQUIREMENT: ORIG+REQ+MTI+RECEIVER+DETECTION.
DATE+ENTERED: 72481.
DESCRIPTION:
"TARGET WHOSE S/N EXCEEDS THE MINIMUM S/N

TARGET WHOSE S/N EXCEEDS THE MINIMUM S/N CONSTANT WILL BE CONSIDERED FOR DETECTION; WITH THE PROBABILITY OF DETECTION CALCULATED (THE GREATER THE

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S/N, THE HIGHER THE PROBABILITY THAT THE TARGET IS
     DETECTED".
     FNTERED+BY: "SGM".
     DOCUMENTED BY:
          SOURCE: ASE+PP+6+3+1+2
                  ASF+FP+6+3+1+3
          SOURCE:
          SOURCE: ASE+PP+6+3+1+4
          SOURCE: ASE+PP+6+3+1+5
          SOURCE: ASE+PP+6+3+2+2.
ORIGINATING+REQUIREMENT: ORIG+REO+MTI+RECEIVER+S.
     DATE+ENTERED: 72481.
     DESCRIPTION:
               "COMPUTE SIGNAL-TO-NOISE RATIO (WHICH INCLUDE
     VELOCITY INTERFEPENCE DUE TO JAMMING, WEATHER EFFECTS,
     PEPETITION FREQUENCY, RECEIVER NOISE BANDWIDTH, BLIND
     SPEEDS, AND SYSTEM LOSS) FOR EACH VEHICLE IN THE
     CANDIDATE LIST".
     ENTERED+BY: "SGM".
     DOCUMENTED BY:
          SOURCE: ASE+PP+6+3+1+2,
ORIGINATING+PEQUIPEMENT: CRIG+PEO+MTI+SHADOWED+TARGET+REMOVAL.
     DATE - ENTERED: 72481.
     DESCRIPTION:
               "ALL TARGETS WITHIN THE CANDIDATE LIST
     DETERMINED TO BE SHADOWED ARE TO BE REMOVED FROM THE
     CANDIDATE LIST".
     ENTERED+RY: "SGM".
     DOCUMENTED BY:
          SOUPCE: ASE+FP+6+3+1+2.
ORIGINATING*REQUIREMENT: OPIG*RER*MTI*TERRAIN*OR*FOLIAGE*SHADOWING.
     DATE+ENTERED: 72481.
     DESCRIPTION:
               "DETERMINE WHICH TAPGETS IN THE MTI CANDIDATE
     LIST ARE SHADOWED (TERPAIN/FOLIAGE) FROM THE SENSOR
     PLATFORM BY THE USE OF A LINE-OF-SIGHT VECTOR FOR EACH
     TAPGET".
     ENTERED+BY: "SGM".
     DOCUMENTED BY:
          SOURCE: 45E+PP+6+3+1+2.
ORIGINATING+REQUIREMENT: OPIG+FER+MTI+VELOCITY+SHAPOW+REMOVAL.
     DATE+ENTERED: 72481.
     PESCRIPTION:
               TREMOVE FROM THE CANDIDATE LIST ALL TARGETS
     WHOSE RAPIAL VELOCITY COMPONENT IS LESS THAN CAN BE
     DETECTED BY THE MTI DAMAR".
     ENTERED+BY: "SGM".
     POCUMENTED BY:
          SOURCE: ASF+PP+6+3+1+2.
ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+AOI.
     PATE+ENTERED: 72781.
     rescription:
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"THE EMISSIONS WHICH MEET AND DETECTION

CRITERIA APE PLACED UN A NELS CAMDIDATE TARGET LIST:

THE ADI FILTER REMOVES FROM THAT LIST THOSE EMISSIONS WHICH ARE LOCATED OUTSIDE OF THE ASE PRE-BRIEFED AREA OF INTEREST".

ENTEREDORY: "SGM".

TRACES TO:

ALPHA: A+05+MELS+APEA+OF+INTFREST+FILTER+ALPHA

DATA: De061+MELS+EMISSION+DURATION+DATA

DATA: D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA

DATA: 0+094+NELS+PFE+ARIEFED+ADI+DATA

DATA: D+095+NELS+PPE+HRIEFED+ADI+FILTERING+CRITERIA+DATA

DATA: D+096+NELS+PPE+BRIFFED+ADI+LOWER+LFFT+DATA

DATA: U+097+NEL S+PPE+BRIEFED+A0I+LOWFR+LEFT+X+DATA

DATA: Dengate Stere APIEFEDEAD1+LOWER+LEFTEY+DATA

DATA: C+099+NELS+PPE+HRIFFEU+ANI+UPPER+RTGHT+DATA

DATA: D+100+NELS+PRE+BRIEFFD+ADI+UPPER+RIGHT+X+DATA

DATA: P+101+MELS+PFE+BRIFFEU+API+UPPFR+RIGHT+Y+DATA

DATA: D+147+NELS+EMISSION+DUPATION+DATA

DATA: D+148+NEUS+EMUSSIUM+SIGNAL+STRENGTH+DATA

DATA: THISTENEL SHEMISSION+OUPATION+DATA

ENTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSION+PREAKONT+EC

ENTITY+CLASS: FC+3+NFLS+TASKS+FC

ENTITY+TYPE: FT+8+MELS+PRE+BRIFFED+ADI+ET

FILE: FOTOENELS+CAPDIDATE+TARGETS+FILE

FILE: FERNELSERPFERRIEFEDEADIEFILE

SUBMET: S+5+MODEL+MELS+SENSUR+SUB.

DUCUMENTED AY!

SOURCE: ASF+PP+6+3+2+2.

ORIGINATING+REGULEMENT: UPIG+REG+DELS+COARSE+AND+FINE+LOCATION.
DATE+ENTERFD: 72761.

DESCUIPTION:

THY USE OF TUDA AND OF MEASUREMENTS THE CHARSE LOCATION FUNCTION DETERMINES THE APPROXIMATE LOCATION OF ACTIVE MARROWRAND EFITTERS, AND THE FINE LUCATION FUNCTION CLACULATES LOCATION BY USING THE CER THRESHOLD OR UNTIL THE TRANSHISSION FINES.

ENTERED+BY: "SOM".

TRACES TO:

ALPHA: A+U6+NELS+CCAFSF+LOCATION+ALPHA

ALPHA: A+07+NELS+FTNF+LOCATION+ALPHA

DATA: DAGTONIEL SHEMETTERACHIVALATA

ENTITY+TYPE: ET+12+OFTFCTED+FMISSIONS+CUARSE+ET

ENTITY+TYPE: ET+13+DFTECTED+FMISSIONS+FINE+ET

SUBMET: SARAGOEL AMELSAGPSAPRUCESSINGASUS.

DOCUMENTED HY:

SOURCE: ASF+PP+6+5+2+3.

ORIGINATING*REQUIPEMENT: ORIG#RED#NEFS*EMITTFR*COUTHOL.
DATE*EMTFRFD: 72781.

DESCRIPTION:

"GENERATE PARAMETERS CONTAINING REFLECTIVITY INFORMATION FOR TARGETS WITHIN EACH AREA OF CHANGE. THE PARAMETERS CAN BE CONVERTED TO INTENSITRY VALUES THAT DESCRIBE THE TENGET IMAGE. THE PARAMETERS ARE ORTAINED BY CHECKING THE LIST OF POTENTIAL DETECTIONS AGAINST THE VEHICLE GROUND TRUTH TO FIND OUT WHAT TYPES OF TARGETS ARE INVOLVED. THESE TARGET TYPES ARE THEN CHECKED AGAINST THE TARGET FILE TO DETERMINE THE REFLECTIVITY FOR A GIVEN

TARGET TYPE".

ENTERED+BY: "SGH".

POCUMENTED BY:

SOURCE: ASE+PP+0+3+4+2+3.

ORIGINATING*REQUIREMENT: OPIG*PEQ*NELS*EMITTER*DFFAULT.
DATE*EMITTERED: 72781.
DESCRIPTION:

"WHEN NO PRE-ARTEFED SIGNAL OF INTEREST IS AVAILABLE TO THE NELS FROM THE ASE ELEMENT, THEN ALL EMITTERS TRANSMITTING ON A FREQUENCY WITHIN THE PLCEIVER PASSHAND ARE FORWARDED TO THE AREA OF INTEREST FILTER".

ENTERED+BY: "SGM".

TRACES TO:

ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA ENTITY+TYPE: ET+10+GPOUND+SHADOWING+CANDIDATE+TARGETS+FT ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET SUBNET: S+5+MODEL+NELS+SFNSOP+SUB.

COCUMENTED BY:

SOURCE: ASF+PP+6+3+2+2.

ORIGINATING+REQUIREMENT: OPIG+REC+VELS+EXTERNAL+INTERFACE.

DATE+ENTERED: 72781.

DESCRIPTION:

"INTERFACES WITH SCENARIO GENERATION SUBSYSTEM AND THE ASE ELEMENT AND SENSOR TASKING AND CUES; CONTROLS SENSOR PLATFORM MANAGEMENT, FREQUENCY SCAN ALLOCATION, TARGET ACOUTSITION EMITTER LOCATION, ACTIVITY INFORMATION, AND SENSOR STATUS ARE FURWARDED TO THE ASE ELEMENT VIA AN EXTERNAL INTERFACE".

FNTERED+BY: "SGA".

TRACES TO:

ALPHA: A+04+INITIAL [ZE+NELS+ALPHA
ALPHA: A+09+MELS+MAKF+SENSOR+REQUESTS+ALPHA
ALPHA: A+10+MELS+MODIF Y+OHRIT+ALPHA
ALPHA: A+11+MELS+MODIF Y+TASK+ALPHA
ALPHA: A+11+MELS+MODIF Y+TASK+ALPHA
ALPHA: A+13+MELS+PHOCESS+COMMANDERS+REDUTREMENTS+ALPHA
ALPHA: A+14+NELS+PHOCESS+COMMANDERS+REDUTREMENTS+ALPHA
ALPHA:
A+15+MELS+PHOCESS+PPIORITIZED+SENSUR+DIPECTIONS+ALPHA

ALPHA: A+16+MELS+PROCESS+REQUESTED+DATA+ALPHA ALPHA: A+17+MELS+SFNSOR+STATUS+ALPHA

ALPHA: A+20+NEI S+STIRVETLL ANCE+AND+TRACK+"SGS+ALPHA

ALPHA: A+25+UPNATE+CARTO+ALPHA
DATA: P+029+CARTO+SECTION+NUM+PATA

DATA: PENSONCATION PRATERIADATA
DATA: PENSONCATA PARTICIPATA PARTI

DATA: P+032+CAPTO+EPPATE+5+DATA

DATA: UMM33MCAMTOMUPCATEMANDATA
DATA: PMM34MCAMTOMUPCATEMANDATA

DATA: D+046+GROUND+TARGET+FREQUENCY+DATA

DATA: P+047+GROUP C+TARGET+LENGTH+DATA
DATA: P+04P+CPOLP G+TARGET+LOC+X+DATA

DATA: Pen49egRoubide FARGET EL OCEYEDATA

DATA: P+050+GHOUND+T4HGET+VELOCITY+GATA

DATA: PANGEANEL SAEMITTERFACTIVITY GROUND FTRUTHEDATA

DATA: PAGSTAMEL SAEPETTERABANDETOTHADATA

DATA: DECERPTED SEEMITTER + CHARACTERTSTICS + DATA

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DATA:
           D+077+A+NELS+EMITTER+MODULATION+TYPE+DATA
    DATAS
           D+077+NELS+EHITTER+MOUULATIUN+TYPE+DATA
     DATAL
           D+07A+A+NELS+EMITTER+PONER+LEVFL+DATA
     DATAL
           D+078+NELS+EMITTER+POWER+LEVEL+DATA
     DATA:
           D+114+PLATFORM+LOCATION+X+DATA
     DATAS
           D+115+PLATFOPM+LOCATION+Y+DATA
    DATAL
           D+116+PLATFORM+LOCATION+Z+DATA
           D4117+PLATFOPM+MOD+X+DATA
    DATA:
           Dellateupmemadeyedata
    DATA:
           D+119+PLATFORM+MOD+Z+DATA
     CATA:
     DATAS
           D+136+SENSOR+MODE+OF+OPEPATION+DATA
     BATAS
           D+142+TRACK+MESSAGF+DATA
           D+176+NELS+EMITTER+BANDWIDTH+DATA
     DATA:
           O+178+NELS+EMITTER+MODULATION+TYPE+DATA
     SATAS
     DATA:
           D+181+NELS+EMITTER+MODULATION+TYPE+DATA
     DATAS
           D+182+NELS+EMITTER+BANDWIDTH+DATA
     ENTITY+CLASS: FC+2+NFLS+SCENARIO+EC
     ENTITY+CLASS: FC+5+NELS+VEHICLE+CHARACTEPISTICS+FC
     ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
     ENTITY+TYPE: ET+6+HELS+VEHICLE+CHARACTERTSTICS+ET
     EVENT: E+1+ACTIVATE+SENSOR+EVENT
     FILE: F+02+CARTO+UPDATE+FILE
     FILE:
           F404+CMDPS49ATA+TO4UPDATE+FILE
           FEO7EGRÜNPETARGETELUCSEFTLE
     FILE:
     FILE:
           F+14+NELS+FMITTEP+ACTIVITY+GROUND+THUTH+FILE
           Fe15enflaefmitterechapacteristicsefile
     FILE:
           F+32+SENSUR+CRRIT+MUDS+FILE
     FILF:
     FILE:
           F433+SENSURAPLATFORMALOCATIONAFILE
     FILE: F+34+SENSOP+STATUS+FTLE
     INPUT+INTERFACE: INTO+NELS+SENSUP
     MFSSAGE:
              - M+O1+FS+NELS+UNIT+AMD+ENVTRON/EMT+DATA+MSG+IN
     MESSAGE:
              MEDZENELSECAPTGEUPDATESEMSGEIN
     MESSAGE:
              -MAO 34NEL SACOMMANDERSAPEDUTREMENTSAMSGAIN
     MESSAGEL
              M+04+MELS+MCOIFIED+TASK+MSG+IN
              -M4054MELS4NON4SURVEILLANCE4TARGET4REPORTS4MSG40UT
     MFSSAGE:
               M+O6+NELS+ORETT+MODIFICATIONS+MSG+IN
     MESSAGE
     MESSAGE !
               MEO7+NELSEPLATFORMELOCATION+REPORTS+MSG+UUT
              M+OR+NELS4PPIORTITZFU+SFNSUR+PIRECTIONS+MSG+IN
     MESSAGE:
     MESSAGE:
               M+09+MELS+REQUESTED+SENSOR+DATA+MSG+IN
     MESSAGE: M+10+YELS+SENSUR+REQUESTS+MSG+0!IT
     MESSAGE:
               M+11+MELS+SENSOR+SYSTEM+STATUS+MSG+DUT
              - M4124NELS4SURVEILLANCE4TARGET4REPORTS4MSG4OUT
     MESSAGE
               ME13ENELSETASKINGERESPONSESEMSGEOUT
     MESSAGE:
     MFSSAGE:
              M+14+NELS+TRACK+MESSAGE+MSG+OUT
     OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS
     RENET: RELEMBLESESFNSOREANDEGPSEPROCESSINGERENET
     RENET: REZEMODELENELSESENSORESYSTEMERENET
     SUBNETS
             - S+1+CHFCK+LELS+SENSOR+STATUS+SUB
     SUBNET:
             S+2+DO+NELS+CPFRATIONAL+CONTROL+SUR.
DOCUMENTED HY:
     SOURCE: 48E+PP+6+3+2+3.
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ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SCAN+OPTIMI7ATION.
DATE+ENTFRED: 72781.
DESCRIPTION:

"AUTOMATICALLY OFFICES FREUDENCY SCAN STRATEGY PASED ON THE DETECTION OF HIGH PRICHITY THREAT EMITTERS".

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ENTEREDOPY: "SGM".
        TRACES TO:
             ALPHA: A+OP+NELS+FREGUENCY+SCAN+OPTIMIZATION+ALPHA
             SUBNET:
                     S+3+MONEL+NELS+GPS+PRUCESSING+SUB.
       DUCUMENTED BY:
             SOURCE: ASE+PP+6+3+2+3.
  ORIGINATING+REQUIPEMENT: CPIC+PEC+NELS+SENSOP+DIPECTOR.
       DATE+ENTERED: 72481.
       DESCRIPTION:
             "THE NELS GPS ATLL PIRECT THE NELS AIRBORNE
SENSOR RECFIVERS TO TULE TO A SPECIFIC FREQUENCY BANDS.
       FNTERED+PY: "SGM".
       TRACES TO:
            DATA: 0+091+NELS+FRERUENCY+SCAN+DATA.
       DUCUMENTED SY:
             SOURCE: ASE+PP+6+3+2+2.
  OFICINATING+REQUIREMENT: OFIC+REG+NELS+STGMAL+OF+INTEREST.
        DATE + ENTERED: 72481.
       TESCFIPTION:
             MA SET OF FREQUENCY - SCAN RANGE DESCRIPTORS
ARE TO BE STORED IN THE NELS GPS, FITH EACH DESCRIPTOR
DEFINING A BEGINNING AND END OF A FREQUENCY RAND TO BE
SCANNED".
        ENTERED+RY: "SGH".
        TRACES TO:
             ALPHA: A+18+NELS+SIGNAL+OF+INTFREST+FILTFR+ALPHA
             DATA: DEGGGENELSERREQUENCYESCAMERANDEDATA
             DATA: D+092+VELS+FPEG+SCAN+LOWER+FRED+DATA
             DATA: D+093+NELS+FHEG+SCAN+UPPER+FRED+DATA
             DATA: D+102+NELS+PPE+BRIEFED+SOI+DATA
             DATA: 0+103+NELS+PRE+BPIFFED+SOI+END+FREQ+DATA
             DATA: D+104+NELS+PRE+BRIEFED+SOI+FREO+DATA
             DATA: P+105+NELS+PPE+BRIEFED+SOI+MODULATION+TYPE+DATA
             DATA: D+106+NELS+PPE+BPIEFFD+S0I+START+FREG+DATA
             ENTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSION+RREAKOUT+EC
             ENTITY+TYPE: ET+4+NELS+FPEOUENCY+SCAN+ET
             ENTITY+TYPE: ET+5+NELS+PPE+BRIFFED+S0I+ET
             FILE: F+19+NFLS+FREQUENCY+SCAN+FILE
             FILE: F+21+NELS+PRE+FREEED+SDI+FILE
             SUBNET: S+5+MONEL+NELS+SENSOR+SUB.
        POCUMENTED BY:
             SOURCE: ASE+PP+6+3+2+2.
   ORIGINATING+REQUIREMENT: ORIGERED+NELS+SIGNAL+TO+NOISE.
        DATE+ENTERED: 72781.
        DESCRIPTION:
             "PEMOVE FROM MELS ADI CANDIDATE LIST ANY
EMITTER WHOSE SZN DOES NOT EXCEED A PRESET THRESHOLD
FOR AT LEAST TWO NELS SENSOR RECEIVERS".
        ENTERENOPY: "SCH".
        TRACES TO:
             ALPHA:
                    A+19+NELS+SIGNAL+TO+NOISE+DETECTARILITY+ALPHA
                    P+001+ALTITUPE+WEATHER+LOC+DATA
             DATA:
             DATA:
                    D+037+CLOUD+COVER+DATA
                    P+03A+CUMDITIONS+AT+ELEVATION+WEATHER+DATA
             DATA:
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D+039+FLFVATTON+WEATHER+DATA

DATA:

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DATA: D+120+PRFCIPITATION+DATA
DATA: D+144+x+wEATHER+LOC+DATA
DATA: D+146+y+wEATHER+LOC+DATA
ENTITY+CLASS: FC+2+NELS+SCENARIO+EC
ENTITY+CLASS: FC+3+NELS+TASKS+EC
ENTITY+TYPE: ET+7+NELS+WEATHER+ET
FILE: F+26+NELS+WEATHER+CONDITIONS+FILE
SUBNET: S+5+MOPEL+NELS+SENSOP+SUP.
DOCUMENTED BY:
SOURCE: ASE+PP+6+3+2+2.
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OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+STGMATURE+ANALYSIS.

DATE+ENTERED: 72781.

DESCRIPTION:

"TRANSFORMS LOCATION AND PARAMETER ESTIMATES INTO TYPED EMITTER REPORTS, EMITTER PARAMETER ESTIMATES, AND TYPED EMITTER TARGET REPORTS: A TRAFFIC TYPE CODE IS GIVEN TO EACH EMISSION BASED ON ITS SIGNAL CHARS".

FNTERED+BY: "SGM".

TRACES TO:

ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA DATA: P+113+NELS+TYPED+EMITTER+REPORT+DATA FILE: F+25+NELS+TYPED+EMITTER+REPORT+FILE SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR. POCUMENTED BY:

SOURCE: ASE+FP+6+3+2+3.

OPIGINATING*REQUIREMENT: ORIG*PEO*NELS*TARGET*ACQUISITION.

DATE*ENTERED: 72781.

DESCRIPTION:

"ESTIMATE EMITTER SIGNAL CHARACTERISTICS, TIME DIFFERENCE OF APRIVAL, AND DIFFERENTIAL DOPPLER INFORMATION FOR EACH DETECTABLE EMISSION".

ENTEPED+BY: "SGM".

TRACES TO:

ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA DATA: D+058+NELS+DD+1+2+DATA DATA: 0+059+NELS+00+1+3+0ATA SATA: D+060+NELS+DD+2+3+DATA DATA: December 54 Estimated + EMITTER + PARAMETERS + DATA DATA: D+089+NELS+ESTIMATED+GROUND+TRUTH+DATA DATA: DelogeNELS+TDOA+1+2+DATA DATAS De110+NELS+TO04+1+3+DATA D+111+NELS+TDUA+2+3+DATA DATA: D+112+NELS+TOUA+OD+DATA DATA: ENTITY+TYPE: ET+11+DFTECTEN+EMISSIONS+DD+TDOA+ET FILE: F+17+NFLS+ESTIMATED+EMITTER+PAPAMETERS+FILE FILE: F+18+NELS+ESTIMATED+GROUND+TPUTH+FTLE F+24+NFLS+TODA+OD+FILE FILF: SUBNET: S+3+MUNEL+PELS+GPS+PROCESSING+SUP.

NOCUMENTED BY: SOURCE: ASF+PP+6+3+2+3.

CRIGINATING+REQUIPEMENT: GRIG+REQ+MELS+TERPAIN+SHADQWING.
DATE+ENTEREU: 72781.
DESCRIPTION:

"ELIMINATE EMITERS ALTHIN NELS ADI CAMDIDATE LIST MMICH CANNOT PE DETECTED BY THE SENSOR DUE TO

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RUNREVSP.LOG: 9
                                24-4A9-1983 18:14
                                                                 Page 174
TERRAIN OR FOLIAGE SHADOWING (SHADOWING DETERMINED BY
AT LEAST TWO NELS PLATFORMS): INPUT TO THE SHADOWING
 ALGORITHM IS TO BE NELS PLATFORM LOCATION, EMITTER
 TARGET LOCATION, AND HYPSOGRAPHIC PATA BASE".
         ENTERED+RY: "SGM".
         TRACES TO:
              ALPHA: A+22+1ELS+TFR9AIN+FOLIAGE+SHADOWING+ALPHA
              SUBNET: S+5+MUDEL+1ELS+SENSOR+SUR.
         DOCUMENTED HY:
              SOURCE: ASE+PP+++3+2+2.
    ORIGINATING+REGULIREMENT: OPIC+REC+PELS+THREAT+TARLE+HPDATE.
         DATE + EMTERED: 72781.
         DESCRIPTION:
              MMAINTAIN A TABLE SEGMENTED AND DROCHED BY
LOCATION, FREQUENCY, AND TIME OF LOCATION: EACH ENTRY
 WILL CONSIST OF THE DATA TYPES: EMITTER ID, FREQUENCY,
LOCATION, TOC. CFP, MANDWINTH, MODILATION, AND TRAFFIC
 TYPE".
         ENTEDED+RY: "SCH".
         TRACES TO:
              AL PHA:
                     - A+23+4E1S+THAFAT+TAGLF+HPDATE+&1P4A
              CATAC
                     PERSON THREATER AND LEADER OF TABLE FOR TA
                     PARSANEI SEEMITTEHACEPADATA
              DATAS
                     PARTZENEL SAEMITTERATIMEACHALOCATTONADATA
              DATA:
                     "HANDONAME! SAE"IT FFAATSAFFTCATYPFA NATA
              DATA:
                     C+177+ VELS+ELITTEH+ CFF+ WATA
              CATA:
                    - THE 1941 EL SEEMITTERETTMEENE HOCATTUNEDATA
              DATAL
              DATA: GATHOWNEL SHEN ITTERATED TOATA
              DATAS
                     ~~+133+~EtS+EtITTFR+CFP+DATA
              ENTITY+CLASS: FC+4+NFLS+THREAT+FC
              ENTITY+TYPE: ET+1+'ELS+E'ISSION+THMEAT+ET
              FILE: FAIDANFLSACAMOIDATEATARGETSAFILE
              FILE: F+15+NFLS+F-1SSION+THREAT+TABLE+FILE
              SUBNET: SEBENGAEL + KELS+GPS+FPACESSING+SUB.
         DOCUMENTED MY:
              SOURCE: ASF+PP+6+3+2+3.
    ORIGINATING+REQUIFEMENT: OPIC+REC+'E-+SENSOR+TASK+TNITIATION.
         DATE+ENTERED: 72481.
         DESCRIPTION:
                   MINITIATION OF SENSOR TASKS AND PEOPMENDATIONS TO TAM
         SENSOR WILL HE ACCOMPLISHED VIA REVIEW OF SENSOR ACTIVITY.
         ENEMY GROUND ACTIVITY, AND CHAREST MISSIONSM.
         ENTEREDORY: "SRA".
         DOCUMENTED HYS
              SOURCE: ASF+PP+6+1+5.
    ORIGINATING+REGULPEMENT: OPICERE DECERATION FRENCH ATFLED HORDERS.
         DATE+ENTERED: 72481.
         DESCRIPTION:
                   "SIMULATION OFFRATOR SHALL RE ABLE TO INSERT
         ORNERS INTO THE SCENARTO SCHEDULE DURING SCENARIO
         EXECUTION".
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ENTEREDOMY: "SOM". DOCUMENTED HY:

SOURCE: ASE+PP+6+2+1.

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ORIGINATING+REQUIREMENT: OPIG+REQ+PERFORM+EXPERIMENT+INITIALIZATION.
     DATE+ENTERED: 72481.
     DESCRIPTION:
               MASET SURSYSTEMS SHALL BE INITIALIZED FOR EACH
     EXPERIMENT BY THE EXPERIMENT INITIALIZATION FUNCTION BY
    FORMATTING AND FORWARDING PRE-EXPERIMENTATION DATA FILES
     TO THE APPROPRIATE ASET SUPSYSTEMS".
    ENTERED+RY: "SGM".
    DOCUMENTED BY:
          SOURCE: ASE+PP+6+2+3.
ORIGINATING+REQUIREMENT: ORIGHRED+PLANNED+MISSTON+COMPARISON.
     DATE+ENTERED: 72381.
     DESCRIPTION:
               "CUMPARE ALL PLANNED MISSIONS TO POSITIONS
     OF ALL KNOWN ADU'S FOR POSSIBLE MISSION THREAT REPORTS.
     ENTEPED+BY: "SGM".
     DOCUMENTED BY:
          SOURCE: ASE+PP+6+1+5.
ORIGINATING+REQUIREMENT: OPIG+REG+PRIORITY+UFCISTUN+MADE.
     DATE - ENTERED: 72481.
    DESCRIPTION:
               "PRIORITIZING TASK FUNCTION WILL UPDATE TASKING QUEUE
     TASKING RENUEST, NOMINATE SENSOR TASK, AND UPDATE THE
    CUEING FILTER FOR HIGH PRICETTY TAPGETS".
    FNTEREC+RY: "SGM".
    DOCUMENTED BY:
          SOUPCE: ASE+PP+6+1+6.
ORIGINATING+REQUIREMENT: OPIG+PEG+PRODUCE+SCENARIO.
    DATE+ENTEREU: 72481.
    DESCRIPTION:
               "SCENARIOS SHALL SE INTITIALIZED PRIOR TO
    EXECUTION FOR FILLING IN THE DATA STRUCTURES OF THE
    WOPLD MODEL AND CREATING A SET OF INTITAL MEMBERS
    SPECIFYING EVENT PROCEDUPES TO BE EXECUTED DURING THE
    SCENARIO".
    ENTERED+RY: "SGM".
    TRACES TO:
          DATAS
                D+072+NELS+EMITTER+DYNAMICS+DATA
                0+073+A+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
          DATAS
                 DE073-PENELS-EMITIFH-FREQUENCY-BANDWILTH-DATA
         DATAL
         DATAS
                D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
         DATAS
                DE075+A+MELSEEMITTER+ID+DATA
                De075+8+4ELS+E"ITTER+ID+DATA
         DATAS
          DATA:
                D+075+NELS+EMITTER+IN+DATA
         DATA: DANTO-NELSEMITTERAL OCATIONANATA
         DATAS
                De081+A+NELS+EMITTER+TRANSMISSION+FREGUENCY+DATA
                POBLOPONEL SEEMITTERATRANSMISSTONAFREGUENCYADATA
         DATA:
         DATAS
                DECEMENT SEEMITTER FIRANSMISSION FREWUENCY POATA
         DATAS
                D+082+A+NELS+EMITTER+VEL+X+DATA
                P+082+1 ELS+EMITTER+VEL+X+DATA
         DATAS
         DATAL
                D+083+4+NELS+EMITTER+VEL+Y+UATA
         UATA:
                PERSONEL SEMITTER+VEL+Y+DATA
         DATAS
                Dendararhel StemITTFR+VFL+Z+DaTa
                D+084+NELSHEMITTFH+VFL+Z+DATA
         DATAS
         DATAL
                Den85+4+NEL S+E-ITTER+X+DATA
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DATA: D+085+B+NELS+EMITIER+X+DATA
     UATA: D+085+NELS+EMITTFH+X+DATA
     DATAS
           PONG CANELS SENITTER + YOUTA
    DATAS
           D+086+9+NELS+EMITTER+Y+DATA
     DATAL
           DEOBGENEL SEEMITTENEYEDATA
     DATA:
           DOOBTOATHELSOEMITTEROZODATA
    DATAS
           DE087+8+NEL SEEMITTER+Z+DATA
    DATAL
           D+087+HELS+EMITTER+Z+DATA
           D+150+NELS+EMITTEH+FPERUENCY+BANDAIDTH+DATA
    DATAL
    DATAL
           D+151+MELS+EMITTER+ID+DATA
    DATA:
           D+152+HELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
    DATA:
           D+153+NEL S+EMITTER+X+DATA
    DATA:
           D+154+NELS+EMITTEH+Y+DATA
    DATA:
           D+155+NELS+EMITTER+Z+DATA
    DATA: DE159-NELSEEMITTER-FRECUFNCY+BANDWILTH+DATA
           D+160+HELS+EMITTER+ID+DATA
    DATA:
    DATAS
           De161+VELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
    DATAS
           DE1624NELSEEMITTEREXEDATA
     DATA:
           - N+103+NELS+EMITTER+Y+DATA
     DATA: DELOGENEL SEEMITTEREZEDATA
     DATA: 0+166+NELS+EMITTER+ID+DATA
     DATA: D+167+NEUS+EMITTER+X+DATA
     DATA: D+168+MELS+EMITTER+Y+DATA
    DATA: De1694NELS4EMITTER+Z+DATA
     DATA: C+171+HELS+EMITTER+ID+DATA
     DATA:
           P+172+VELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
    DATA:
           DE17349ELSEEMITTEREXEDATA
           DETTUENEL SERMITTEREYEDATA
    DATA:
    DATA: D+175+NELS+EMITTER+Z+DATA.
DOCUMENTED BY:
     SOUPCE: ASE+PP+6+2+1.
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ORIGINATING+REQUIREMENT: ORIGHRED+PURGE+CORRELATION+CENTER.
DATE+ENTERED: 72381.
DESCRIPTION:

"PURGE FALSE REPORTS FROM CORRELATION CENTER
DATA BASE FILES (FALSE REPORTS BEING REPORTS USED TO
START GROUPS AND HAVING RECEIVED NO UPCATES AITHIN A
CEPTAIN TIME PERIOD".
ENTEREDERY: "SGM".
DOCUMENTED BY:
SOURCE: ASF*PP+6+1+4.

ORIGINATING+REQUIREMENT: CRIG+RE 3+PEPDRIS+WITH+DFTECTED+EHRORS.
DATE+ENTERED: 62981.
PESCRIPTION:

"ALL SURVETLY ANCE PEPORTS WILL HE COMPARED TO THE EXISTING DATA IN THE SURVETLY ANCE FILE, IF THE ACTIVITY LEVEL OF AN AREA EXCEEDS THE THRESHOLD SPECIFIED IN THE COMMANDERS HEQUIREMENTS, THE HEPORT WILL HE FLAGGED AS A POTENTIAL THREAT APEA". ENTERED+BY: "SGM". DOCUMENTED BY:

SOURCE: ASE+PP+6+1+2 SOURCE: ASE+PP+c+1+3.

ORIGINATING+REQUIREMENT: OPIC+RER+REVIEW+COLLATERAL+INTELLIGENCE.
DATE+ENTERED: 72781.

DESCRIPTION: "DATA SHALL BE RECEIVED FROM THE ILNTELLIGENCE CENTER IN THE ENVIRONMENT SIMULATOR AND DISPLAYED TO THE CONSOLE OPERATOR; TO BE FITHER REJECTED OR FORWARDED TO THE ASE ELEMENT". ENTERED+RY: "SGM". DOCUMENTED PY: SCURCE: ASE+PP+6+4+2. OPIGINATING+REQUIREMENT: ORIG+RED+ROUTE+MESSAGE. DATE+ENTERED: 72381. DESCRIPTION: PROUTE MESSAGE TO THE APPROPRIATE FUNCTION OR ANALYST". FNTERED+RY: "SGM". DOCUMENTED BY: SOURCE: ASE+PP+6+1+2. ORIGINATING+REQUIPEMENT: OPIG+RED+SCFNARTO+GENERATION. DATE+ENTERED: 72481. DESCRIPTIONS "THEPE SHALL BE THE ABILITY TO SIMULATE HATTLE FIELD CONDITIONS (IN THE FORM OF SCENARIOS) BASED UPON INITIAL URDERS, INITIAL CONDITIONS FOR THE ENVIRONMENT, AND SETS OF COMMANDS DEFINING REALISTIC UNIT REACTIONS". ENTERED+RY: "SGM". TRACES TO: D+130+A+SCENARIO+GEN+ID+NUM+DATA DATA: D+130+R+9CENARIO+GEN+ID+NUM+DATA DATA: D+130+SCFNARIO+GEN+ID+NUM+DATA DATA: D+156+SCENARIO+GEN+ID+NUM+DATA DATAS D+165+SCFNARIO+GEN+ID+NUM+DATA DATA: DATA: D+170+SCFNARIU+GEN+ID+NUM+DATA. DOCUMENTED BY: SOURCE: ASE+PP+6+2+1. ORIGINATING+REQUIREMENT: OPIG+REG+SCENARIO+TIMING. DATE+ENTERED: 72481. DESCRIPTION: "ALL INITIAL OPDERS FOR THE SCENARIOS SHALL HAVE AN ASSOCIATED TIME FUR EXECUTION TO ALLOW THEM TO RE INSERTED INTO A TIME-CROERED SCHEDULE". ENTERED+BY: "SGM". TRACES TO: D+063+A+NELS+E*ISSION+START+TIME+DATA DATAI 0+063+P+NELS+E"ISSTON+START+TIME+DATA DATA: D+063+NELS+EMISSION+START+TIME+DATA DATA: D+064+A+NELS+EMISSION+STOP+TIME+DATA DATA: D+064+NELS+EMISSION+STOP+TIME+DATA DATAL D+071+NELS+EMITTER+DATA DATA: D+149+NELS+EMISSION+START+TIME+DATA DATAS D+158+NELS+EMISSION+START+TIME+DATA DATAS

ORIGINATING+REQUIREMENT: ORIGHRER+SENSON+ACTIVITY+FLEMENTS.
TRACES TO:

F+16+NELS+EMITTEP+FILE.

SOURCE: ASE+PP+6+2+1.

FILE: F+

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DATA: D+044+FREQUENCY+SCAN+PARAMETER+DATA
          UATA: D+117+PLATFURM+MOU+X+DATA
          DATA: D+118+PLATFORM+MOD+Y+DATA
          DATA: D+119+PLATFORM+MOD+Z+DATA
FILE: F+32+SENSOR+ORPIT+MODS+FILE
          MESSAGE: MEGHENELSEDERITEMODIFICATIONSEMSGEIN.
OPIGINATING+REQUIPEMENT: OPIG+9E0+SEMSCR+FEASIBILITY.
     DATE+ENTERED: 72481.
     DESCRIPTION:
               MOETERMINE THE FEASIBILITY OF SENSOR RESPONDING
     TO A TASK VIA THE SENSOR ACTIVITY FILE, TERRAIN
     SHADOWING INFURMATION, SENSOR FIFLD OF VIEW, AND
     POSSIBLE SENSOR SCANNING FREQUENCIES".
     ENTERED+BY: "SGA".
     TRACES TO:
          DATA: D+143+x+LOC+FEASIBLE+DATA
          DATA: D+145+Y+LOC+FEASIBLE+DATA
          FILE: F+05+FEASIRLF+ACTIVITY+APEA+FILE.
     DOCUMENTED AY:
          SOURCE: ASE+PP+6+1+6.
ORIGINATING+REQUIREMENT: OPIG+REQ+SPECIAL+TARGET+ID.
     DATE+ENTERED: 72381.
     DESCRIPTION:
               "SPECIAL TARGETS (COMMANDERS VEHICLE, ADUIS)
    WILL BE IDENTIFIED BY NETWORK ANALYSIS AND SENT TO
    THE DYNAMIC SITUATION ASSESTENT FUNCTION".
     ENTERED+RY: "SGA".
     DOCUMENTED BY:
          SOURCE: 4SE+PP+6+1+5.
ORIGINATING+REQUIRFMENT: OFIC+REG+SPECIAL+TARGET+IDENTIFICATION.
     DATE+ENTERED: 72381.
     PESCRIPTION:
               "IDENTIFICATION OF COMMUNICATION NETWORKS IS
     TO BE DONE USING ATDEFRAND AND NARROMFRAND EMITTER
     PEPOPTS".
     ENTEPED+RY: "SGM".
     DOCUMENTED BY:
          SOURCE: ASE+PF+6+1+5.
OPIGINATING+REGUIPEMENT: OPIG+PEG+SPECIAL+TARGET+STANDING+PERUFSTS.
     DATE+ENTERED: 72381.
     DESCRIPTION:
               "STANDING PERUFSIS WILL BE ISSUED BY THE
     SPECIAL TARGET ANALYZED IN UPDER TO RECEIVE EMITTER
     LOCATOR REPORTS".
     ENTERENHAY: "SOM".
     DOCUMENTED AY:
          SOURCE: ASF+FP+6+1+5.
OPIGINATING+REQUIFEMENT: OPIG+PEG+SPECIAL+TARGET+TASKING.
     DATE+ENTERED: 72381.
     resceiption:
               TIME STA WILL PE ARLE TO PREDICT EMIL. 17
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LUCATIONS IN THE NETWORK OF EMITTER FREQUENCIES, AND THEN ISSUE AN AREA OF INTEREST OF SIGNAL OF INTEREST

CANDIDATE SENSOR TASK".
ENTERENOBY: "SGM".
DOCUMENTED BY:
SOURCE: ASE+PP+6+1+5.

ORIGINATING+REQUIREMENT: ORIG+REQ+TARGETS+WITHIN+BEAM+COVERAGE.
DATE+ENTERED: 72481.
DESCRIPTION:

"EXTRACT TARGETS WITHIN THE VEHICLE GROUND TRUTH DATA BASE WHICH FALL WITHIN RADAR COVERAGE AREA, AND ENTER THEM IN AN MTI CANDIDATE TARGET LIST". ENTEPED+BY: "SGM", DOCUMENTED BY: ASE+PP+6+3+1+2.

3000001 43647740434142.

ORIGINATING+REQUIREMENT: ORIG+RED+TARGET+ID+CROSS+REFERENCE,
TRACES TO:
DATA: D+135+SENSOR+ID+DATA.

ORIGINATING+REQUIREMENT: ORIG+REQ+TARGET+ORSERVATION+CONTINUTTY.
DATE+ENTERED: 72381.
DESCRIPTION:

"ENSURE CONTINUITY OF OBSERVATION OF TARGETS BY PREDICTING WHERE A SENSOR MIGHT LOSE TRACK, AND ISSUING APPROPRIATE SENSOR TASKS TO AVOID TRACK LUSS". ENTERED+BY: "SGM".

DOCUMENTED BY:
SQUPCE: ASE+PP+6+1+5.

ORIGINATING+REGUIREMENT: ORIG+RED+TASKING+RESPONSE+FORWARDING.
DATE+ENTERFO: 72481.

DESCRIPTION:

"TASKING RESPONSE HANDLER WILL RECFIVE ALL SENSOR TASKING RESPONSES AND INFFASIBLE TASKS AND FORWARD THEN TO THE PARTICULAR FUNCTION WHICH REDUFSTED THE SENSOR TASK, AND UPDATE THE TASKING GUEUF AS TO THE STATUS OF THE PEQUEST".

ENTERED+3Y: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+1+6.

ORIGINATING+REQUIREMENT: ORIG+#ED+TASK+TIME+LIMIT.
DATE+ENTERED: 72481.

PESCRIPTION:

"A TASK WHICH HAS EXCEEDED THE MAXIMUM TIME LIMIT WILL BE PURGED FROM THE TASKING QUEUE". ENTEREDERY: "SGM".

DOCUMENTED BY:
SOURCE: ASEEPP+6+1+4.

ORIGINATING+REQUIREMENT: ORIG+RED+TC+CYCLE+START.
PATE+ENTERED: 72781.
PESCRIPTION:

AFTER RECEIVING MESSAGES FROM ALL PHOCESSORS THAT THE SIMULATION IS COMPLETE FOR THAT CYCLF. IF THE T & C CLOCK RUNS OUT HEFORE ALL PROCESSING IS COMPLETE, THE T & C SHALL HAVE THE OPTION OF SENDING A STOP CYCLE

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MESSAGE TO THE ASE".
ENTERED+BY: "SGM".
TRACES TO:
ALPHA: A+24+RESET+NELS+ALPHA
DATA: D+141+TIME+DATA
MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN.
DOCUMENTED BY:
SOUPCE: ASE+PP+6+5+2.
```

ORIGINATING+REQUIREMENT: OPIG+REG+TC+DISPLAY+AND+CONTROL.

DATE+ENTERED: 72781.

DESCRIPTION:

"THE DISPLAY AND CONTROL FUNCTION SHALL.

PROVIDE FOR OPERATOR INTERACTION WITH THE T & C PURING EXPERIMENT RUN TIME".

ENTERED+BY: "SGM".

POCUMENTED BY:

SOURCE: ASE+PP+6+5+1.

ORIGINATING+REQUIREMENT: ORIG+PER+TC+MESSAGES+TO+CONTROL+AND+DTSPLAY

DATE+ENTERED: 72781. DESCRIPTION:

"THE MESSACE FILTER FUNCTION SHALL SEND A COPY OF ALL MESSAGES THAT MEET SPECIFIED CRITERION (AS YET UNDEFINED) TO THE FUNCTION DISPLAY FUNCTION. ENTERED BY: "SGM".
THACES TO:
DATA: De140+TRD+DATA.

DUCHMENTED HY: SOUPCE: 4SF+PP+6+5+1.

ORIGINATING+RENUIREMENT: OPIG+RED+TC+MESSAGE+CHECK.
DATE+ENTERED: 72781.
DESCRIPTION:

"THE MESSAGE FILTER FUNCTION SHALL CHECK EACH MESSAGE BEFORE IT IS SENT TO THE APPROPRIATE ASET SUBSYSTEM IF IT IS A TARGET MESSAGE, THE SCENARIO GENERATOR ID NUMBER FOR THE TARGET IS STRIPPED OFF BEFORE THE MESSAGE IS RELAYED TO THE ASE FLEMENT". ENTEPED+BY: "SG4".

DOCUMENTED BY:

SOURCE: ASE+PP+6+5+1.

DRIGINATING+REQUIREMENT: OFIG+PEG+TC+MESSAGE+FILTER.
DATE+ENTERED: 72781.

DESCRIPTION:

"THE MESSAGE FILTER SHALL COLLECT ON-LINE STATISTICS, STORE THEM AND PASS THEM TO THE T R C DISPLAY AND CONTPOL FUNCTION". ENTERED-RY: "SGM".

DOCUMENTED BY:

SOURCE: ASE-PP-6-5-1.

OPIGINATING+REQUIREMENT: OPIC+FED+TC+MESSAGE+SEPARATOR.

DATE+ENTERED: 72781.

DESCRIPTION:

"THE T & C MESSAGE FILTER FUNCTION SHALL SEPARATE

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SIMULATION CONTROL MESSAGES AND SEND THEM TO TIMING AND SYNCHRONIZATION LOGIC. ALL REMAINING MESSAGES SHALL BE RECORDED IN AN ARCHIVE FILE". ENTERED+BY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+5+1.
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ORIGINATING+REQUIREMENT: ORIG+REQ+TC+MESSAGL+START.

DATE+ENTERED: 72781.

DESCRIPTION:

"THE ASE ELEMENT SHALL HAVE THE OPTION OF STARTING THE NEXT SIMULATION CYCLE VIA A MESSAGE TO T 2 C".

ENTEREC+BY: "SGM".

DOCUMENTED BY:

SOURCE: ASE+PP+6+5+2.

ORIGINATING+REQUIREMENT: OPIG+RED+TC+OPERATOR.

PATE+ENTERED: 72781.

PESCRIPTION:

"THE T & C UPEPATOR SHALL BE ABLE TO START
ALL ASET PROCESSORS BY THE EXECUTION OF A STUGLE

ALL ASET PROCESSORS BY THE EXECUTION OF A SINGLE COMMAND".
ENTERED+RY: "SGM".
TRACES TO:
DATA: D+140+TBD+DATA.
DOCUMENTED BY:
SOURCE: ASE+PP+6+5+2.

ORIGINATING+REQUIREMENT: OFIC+9ED+TC+SYNC.
DATE+ENTERED: 72781.
DESCRIPTION:

"THE T & C SYNCHFONIZATION PROCESS
SHALL ISSUE 4 MESSAGE TO EACH FUNCTIONAL PROCESSOR
GIVING IT THE CURRENT PSEUCO-TIME (FROM COMMON SYSTEM
CLOCK) AND AN INDICATION TO START PROCESSING A STHULATION
CYCLE. IT WILL ALSO START ITS OWN CLOCK COUNTING LENGHT
OF REAL-TIME FOR A SIMULATION CYCLF".
FNTERED+BY: "SGM".
TRACES TO:

DATA: D+141+TIME+DATA.
DOCUMENTED BY:

OUTPUT+INTERFACE: TO+TIMING+AND+CONTPUL+FROM+NFLS.

DATE+ENTERED: 1106R1.

DESCRIPTION: "PASSES MESSAGES ROUND FOR ASE VIA T&C".

ENTERED+RY: "JJF=NELS".

CONNECTS TO:

SUBSYSTEM: SS+1+REST+DF+ASE.

SUBSYSTEM: SS+1+REST+OF+ASF. PASSES:

SOURCE: ASE+PP+6+5+2.

ES:

MESSAGE:

M

TRACED FROM:

ORIGINATING+REGUIPEMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.

PEFERRED BY:

R+NET: R+2+MODEL+NFLC+SENSOR+SYSTEM+R+NET

SUBNET: S+1+CHFCK+NELS+SENSOR+STATUS+SUB

SUBNET: S+2+D0+NFLS+CPFRATIONAL+FONTPOL+SUR.

RSL+STANDARD: S+ALPHA.

DATE+ENTERED: 52281.

ENTERED+RY: "8 DEMONY".

NAMING+CONVENTION: "SUFFIX: +ALPHA".

RSL+STANDARD: S+DATA.

PATE+ENTERED: 52281.

ENTERED+BY: "H DEMONY".

NAMING+CONVENTION: "SUFFIX: +DATA".

RSL+STANDARD: S+DECISION,

PATE+ENTERED: 52281.

ENTERED+BY: "B DEMOOY".

NAMING+CONVENTION: "PREFIX : DECISION+ ".

RSL+STANDARD: S+ENTITY+CLASS.

DATE+ENTERFD: 52281.

ENTERED+RY: "6 DEMONY".

NAMING+CONVENTION: "SUFFIX : +EC ".

RSL+STANDARD: S+ENTITY+TYPF.

DATE+ENTERED: 52281.

ENTERED+BY: "B DEMONY".

NAMING+CONVENTION: "SUFFIX : +ET ".

RSL+STANDARD: S+EVFNT,

DATE+ENTERED: 52281,

ENTERED+8Y: "B DEMONY",

NAMING+CONVENTION: "SUFFIX: +EVENT",

RSL+STANDARD: S+EXTENSION.

DATE+ENTFRED: 52281.

ENTERED+RY: "B DEMONY".

NAMING+CONVENTION: "PRFFIX : X+ ".

RSL+STANDARD: S+INPUT+INTERFACE.

DATE+ENTERED: 52281.

ENTERED+RY: "B DEMONY".

NAMING+CONVENTION: "PREFIX: INTO+ ".

RSL+STANDARD: S+INPUT+MESSAGE.

DATE+ENTERED: 52281.

ENTERED+9Y: "B DEMONY".

NAMING+CONVENTION: "SUFFIX: +MSG+IN".

RSL+STANDARD: S+ORIGINATING+REQUIREMENT.

CATE+ENTERED: 52881.

ENTERED+BY: "B DEMONY".

NAMING+CONVENTION: "PREFIX: DRIG+REG+ ".

RSL+STANDARD: S+OUTPUT+INTERFACE.

DATE+ENTERED: 52281.
ENTERED+RY: "B DEMOOY".
NAMING+CONVENTION: "PREFIX : TO+ ".

RSL+STANDARD: S+DUTPUT+MESSAGE.

DATE+ENTERED: 52281.

ENTERED+RY: "B DEMODY".

NAMING+CONVENTION: "SUFFIX: +MSG+OUT".

RSL+STANDARD: S+PERFORMANCE+REGUIREMENT.
DATE+ENTERED: 52281.
ENTERED+8Y: "B DEMONY".
NAMING+CONVENTION: "PREFIX : PERF+REQ+ ".

RSL+STANDARD: S+RSL+STANDARD.

DATE+ENTERED: 52881.

ENTERED+RY: "B DEMONY".

NAMING+CONVENTION: "PREFIX : S+ ".

RSL+STANDARD: S+P+NET.

PATE+EVITERED: 52281.

ENTERED+BY: "B DEMODY".

NAMING+CONVENTION: "SUFFIX: +P+NET".

RSL+STANDARD: S+SOURCE.

DATE+ENTERED: 52281.

ENTERED+84: "B DEMODY".

NAMING+CONVENTION: "PREFIX : SOURCE+ ".

RSL+STANDARD: S+SURNET.

DATE+ENTERED: 52281.

ENTEPED+RY: "B DEMONY".

NAMING+CONVENTION: "SUFFIX: +SUR".

RSL+STANDARD: S+SURSYSTEM.

DATE+ENTERED: 52281.

ENTEPED+RY: "B DE*OOY".

NAMING+CONVENTION: "PREFIX : SS+ ".

RSL+STANDARD: S+UNSTRUCTURED+REGUIREMENT.
DATE+ENTERED: 52281.
ENTERED+RY: "B DEMONY".
NAMING+CONVENTION: "PREFIX : UNSTRUC+REG+ ".

RSL+STANDARD: S+VALIDATION+PATH.

DATE+ENTERED: 52281.

ENTERED+RY: "B DEMONY".

NAMING+CONVENTION: "SUFFIX: +VAL+PATH".

RSL+STANDARD: S+VALIDATION+POINT.

DATE+ENTERED: 52281.

FNTERED+BY: "B DEMODY".

NAMING+CONVENTION: #RUFFIX : +VAL+POINT ".

RSL+STANDARD: S+VERSION.

DATE+ENTERED: 52281.

ENTEPED+RY: "B DEMODY".

NAMING+CONVENTION: "PREFIX : VERSION+ ".

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RONET: ROLLOHANDLEONELSOSFNSOROANDOGPSOPROCESSINGORONET.
     DATE+ENTERED: 12082.
     DESCRIPTION:
             "CONTROLS NELS SENSUR; IF TASKS ARE WAITING TO BE
   DONE, IT INVOKES THE SENSOR TO PERFORM THE NEXT TASK".
     ENTERED+BY: "JJF-NFLS".
     REFERS TO:
          SUBNET: S+1+CHECK+ ELS+SENSOR+STATUS+SUB
          SUBNET: S+2+DU+NELS+CPERATIONAL+CONTROL+SUR.
     ENABLED RYL
          EVENTA L+1+ACTIVATE+SENSOR+EVENT.
     TRACED FROM:
          OPIGINATING + REGULTREMENT: OPIG+REG+NELS+EXTERNAL+INTERFACE.
     STRUCTURE:
                 S+2+DO+NELS+DPERATIONAL+CONTROL+SUR
        SUBNETE
        SUBMET: SELECHECKENELSESENSORESTATUSESUB
        TERMINATE
     END.
RENET: REZEMBDEL + NELSESEMSPRESYSTEM + RENET.
     DATE+ENTERED: 11882.
     DESCRIPTION: "PROCESSING FLOW WITHIN NELS SENSOR SYSTEM".
     ENTERECHRY: "JJF-NFLS".
     REFERS TO:
          ALPHA: A+OU+INTTIALITE+NELS+ALPHA
          ALPHA: A+09+NELS+MAKE+SENSOR+RENUESTS+ALPHA
          ALPHA: A+10+HEL S+MODIFY+ORRIT+&LPH&
          ALPHA: A+11+NELS+HODTFY+TASK+ALPHA
          ALPHA:
                 A+14+NELS+PHOCESS+COMMANDERS+REPUTREMENTS+ALPHA
          ALPHA:
          A+15+NELS+PPOCESS+PRICATITZFD+SFNSOR+DIPECTIONS+ALPHA
          ALPHA: A+16+NELS+PFDCESS+RFUHESTFD+DATA+ALPHA
                 A+24+RESETANELSHALPHA
          ALPHA:
          ALPHA:
                 A+25+UPDATE+CARTO+ALPHA
          DATA: DenogeasFT+MSG+WANE+DATA
          DATA: 0+140+T60+DATA
          ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
          ENTITY+TYPE: ET+4+HELS+FREDUFNCY+SCAN+FT
          ENTITY+TYPE: ET+5+1ELS+PRE+BRIEFFD+SOI+ET
          ENTITYOTYPE: ETOPONELSOPPEOSBIFFFUGANIGET
          IMPUT+IMITERFACE: INTC+MELS+SENSOR
          UUTPUT+INTERFACF: TO+ITHING+ANC+COMTROL+FRCM+NFLS
          SUBNET: S+1+CHFCK+WELS+SFNSOF+STATUS+SMB.
     TRACED FROM:
          ORIGINATING + REGUIDE ME'T: ORIGH REGENER SHEYTERMALE INTERFACE.
     STRUCTURE:
        INPUT+INTERFACE: INTO+NELS+SENSOR
        CONSIDER DATA: PERCHASET+MSG+NAME+DATA
        IF (MN+05+NFLS+NON+SUFVEILLANCE+TARGET+REPORTS OR
               MN+07+NELS+PLATFORM+LUCATION+REPORTS OR
               MN+10+NELS+SENSUR+PEOUFSTS OR
               MN+11+NELS+SFNSUR+SYSTEM+STATUS OR
               MM+12+MELS+SURVETLLANCE+TARGET+PEPORTS UR
               HM+13+MELS+TASKING+RESPONSES UR
               MH+14+HELSTRACK+MESSAGE)
           TERMINATE
```

```
OR (MN+01+ES+NELS+UN17+4ND+ENVIRONMENT+DATA)
   ALPHA: A+04+INITIALIZE+NELS+ALPHA
   ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA
   OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
OR (MN+15+T+AND+C+STOP+NELS)
   ALPHA: A+24+RESET+NELS+ALPHA
   TERMINATE
OR (MN+02+NELS+CAPTO+HPPATES OR
       MN+03+NELS+COMMANDERS+REQUIREMENTS OR
       MN+04+NELS+MODIFIED+TASK UR
       MN+06+NELS+ORBIT+MODIFICATIONS OR
       MN+OR+NELS+PRICRITIZED+SENSOR+DIRECTIONS OR
       MN+09+NELS+REQUESTED+SENSOR+DATA1
      SUBNET: S+1+CHECK+NELS+SENSOR+STATUS+SUB
      TERMINATE
   AND
      CONSIDER DATA: D+004+ASET+MSG+NAME+DATA
      IF (MM+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA OR
                MN+05+NELS+NON+SURVFILLANCE+TARGET+REPORTS OR
                MN+07+NELS+PLATFORM+LOCATION+REPORTS OR
                MM+10+NELS+SENSOR+REQUESTS OR
                MN+11+NELS+SENSOR+SYSTEM+STATUS OR
                MM+12+NELS+SURVEILLANCE+TARGET+REPURTS OR
                MN+13+NFLS+TASKING+RESPONSES OR
                MN+14+NFLS+TRACK+MESSAGE OR
                MN+15+T+AND+C+STOP+NELS)
         TERMINATE
      OR (MN+02+NFLS+CARIN+UPDATES)
         ALPHA: A+25+UFDATE+CAPTO+ALPHA
         TEPMINATE
      OR (MN+03+NFLS+COMMANDERS+REQUIREMENTS)
         SELECT ENTITY+TYPE: ET+5+NELS+PRE+8RIEFFD+SOI+ET
         SUCH THAT (0+140+TRD+DATA = TRUE)
         SELECT ENTITY+TYPE: ET+8+NELS+PRE+BRIFFFD+ARI+ET
         SUCH THAT (D+140+TBD+DATA = TRUE)
         ALPHA:
         A+14+NELS+PROCESS+COMMANDEPS+REQUIREMENTS+ALPHA
         TEPMINATE
      OR (MN+08+NFLS+PHIOPITIZED+SENSOR+DIRECTIONS)
         SELECT ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+FT
         SUCH THAT (D+140+TBD+DATA = TRUE)
         ALPHA:
        A+15+NELS+PROCESS+PRIDRITIZED+SFNSD9+DIRECTIONS+ALPHA
         TERMINATE
      OR (MN+04+NFLS+MODIFIED+TASK)
         SELECT ENTITY+TYPE: ET+3+HELS+FLIGHT+FT SHCH THAT
         (D+140+TAD+DATA = TRUE)
         ALPHA: A+11+NFLS+MODIFY+TASK+ALPHA
         OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS
      OR (MN+06+NFLS+ORFIT+MODIFICATIONS)
         SELECT ENTITY+TYPE: ET+3+NELS+FLIGHT+ET SUCH THAT
         (D+140+TRU+DATA = TRUE)
         ALPHA: A+10+NFLS+MODIFY+OPHIT+ALPHA
         TERMINATE
      OR (MN+09+NFLS+PERUFSTED+SEMSOR+DATA)
         SPLECT ENTITY TYPE: ET+3+NELS+FLIGHT+FT SUCH THAT
         (D+140+TRD+DATA = THUE)
```

ALPHA: A+16+NELS+PROCESS+PEDUESTED+DATA+ALPHA

```
TERMINATE
              END
           END
        END
     END.
SOURCE: ASE+PP+6+1+2.
     DATE+ENTEREDI 62981.
     DESCRIPTION: "ROUTE AND FILTER INCOMING DATA".
     ENTERED+BY: "SGM".
     DOCUMENTS:
          ORIGINATING+REQUIREMENT:
          ORIG+RED+CUEING+FILTER+AGAINST+SUPVEILL+REPORTS
          ORIGINATING+REQUIREMENT: URIG+PEQ+DISTRIBUTED+PEPOPTS
          ORIGINATING+REQUIREMENT:
          OPIG+REW+PEPORTS+WITH+DETECTED+FRPORS
          ORIGINATING+REQUIREMENT: URIG+REG+ROUTF+MESSAGF.
SOURCE: ASE+PP+6+1+3.
     DATE+ENTERED: 62981.
     DESCRIPTION: "RUILD ASE FLEMENT DATA BASE".
     ENTERED+BY: "SGM".
     POCUMENTS:
          ORIGINATING+REQUIPEMENT: OPIG+REG+COPRFLATION+UPDATE
          URIGINATING+REQUIREMENT: URIG+RED+DIRECTING+SENSORS
          UPIGINATING + REQUIREMENT:
          ORIGHRESHREPORTS+WITH+DETECTED+ERRORS.
SOURCE: ASE+PP+6+1+4.
     DATE-ENTERED: 62981.
     DESCRIPTION: "MANAGE ASE ELEMENT DATA BASE".
     ENTERED+BY: "SGM".
     DOCUMENTS:
          ORIGINATING * REQUIPEMENT:
                                    ORIGHREGHBUTLDHAUXILIARYHFILES
          URIGINATING + REGHIREMENT:
                                    -ORIGERERECONSTRUCTECUEINGEFTLIER
          ORIGINATING+REQUIREMENT:
          OPIG+RES+COPRELATION+CENTER+UPDATE+HAMDLER
          ORIGINATING+REQUIREMENT:
          ORIGHRER+FXTERNAL+REGUEST+REFORMATTING
          ORIGINATING+REGUIREMENT: ORIG+REG+PURGE+CORRELATION+CENTER
SOURCE: ASF+PP+6+1+5.
     PATE + ENTERED: 62981.
     DESCRIPTION: "EXPLOIT ASE FLEMENT DATA BASF".
     ENTERED+RY: "SCM".
     DOCUMENTS:
          ORIGINATING + REQUIREMENT:
          ORIGORE POPONAMICOSITUATION OPRIORITY CASSESSMENT
          ORIGINATING+REQUIREMENT:
          ORIGHREN-FMITTEP+CHARACTERISTICS+UPDATE
          ORIGINATING+REQUIREMENT: ORIG+REC+ENFMY+FORCE+9UTLD
          OPIGINATING+REGNIREMENT:
                                    OPIG+RED+LIMITING+LOCATOR+REPORTS
          ORIGINATING+REWHIREMENT:
          URIG+REQ+MODIFIFD+MISSION+COMPARISON
          ORIGINATING+REGHITEMENT: ORIG+REG+MOVING+ADU+CHECK
```

```
ORIGINATING+REDHIREMENT:
          ORIG+REG+NEW+SENSOR+TASK+INITIATION
          ORIGINATING+REQUIPEMENT:
          ORIGHREQ+PLANNED+MISSION+COMPARISON
          DRIGINATING+REQUIREMENT: ORIG+REQ+SPECIAL+TARGET+ID
          ORIGINATING+REQUIPEMENT:
          ORIGHRER+SPECIAL+TAPGET+IDENTIFICATION
          ORIGINATING+REQUIREMENT:
          ORIGHREQ+SPECIAL+TARGET+STANDING+PERUFSTS
          ORIGINATING+REQUIPEMENT: ORIG+REQ+SPECIAL+TARGET+TASKING
          ORIGINATING+REQUIREMENT:
          ORIGERER-TARGET+URSERVATION+CONTINUITY.
SOURCE: ASE+PP+6+1+6.
     DATE+ENTERED: 62981.
     DESCRIPTION: "MANAGE SENSOPS".
     ENTERED+BY: "SGM".
     DOCUMENTS:
          ORIGINATING+REQUIREMENT:
                                    OPIG+RER+ASF+TASK+PRIORITY
          ORIGINATING+REQUIPEMENT:
                                    ORIG+PEG+CANCELLED+TASK
          ORIGINATING+REQUIREMENT: ORIG+REQ+FEASIBLE+CHECK
          ORIGINATING+REQUIREMENT:
          ORIGHRESHINFEASIBLE+TASK+MOTIFICATION
          ORIGINATING+REQUIREMENT: ORIG+RED+PHIORITY+DECISION+MADE
          ORIGINATING+REQUIREMENT:
                                   ORIGHREO+SENSOR+FEASIBILITY
          URIGINATING+REQUIREMENT:
          ORIG+REQ+TASKING+RESPONSE+FORWAPDING
          URIGINATING+REQUIREMENT: ORIG+REQ+TASK+TIME+LIMIT.
SOURCE: ASE+PP+6+1+7.
     DOCUMENTS:
          ORIGINATING+REQUIREMENT:
          ORIGOREGOCORRELATEDOREPORTO ELEMENTS.
SOURCE: ASE+PP+6+2+1.
     DATE+ENTERED: 72181.
     DESCRIPTION: "SCENARIO GENERATOR".
     ENTERED+RY: "SGM".
     DOCUMENTS:
          ORIGINATING+REQUIREMENT: ORIG+REQ+CONSTRUCT+WORLD+MODEL
          ORIGINATING + REQUIREMENT:
          ORIGHRER-OPERATOR-GENERATED-ORDERS
          ORIGINATING+REQUIREMENT: ORIG+REQ+PRODUCF+SCENARIO
          OPIGINATING+REQUIREMENT: ORIG+PEQ+SCFNARIO+GENERATION
          ORIGINATING+REQUIREMENT: ORIG+RED+SCENARIO+TIMING.
SOURCE: 45F+PP+6+2+1+2.
     DOCUMENTS:
          ORIGINATING+REQUIREMENT: OPIG+REQ+ALTER+SCENARIO+DEFAULTS.
SOURCE: ASE+PP+6+2+2.
     DATE+ENTERED: 72181.
     DESCRIPTION: "INTELLIGENCE SIMULATOR".
     FNTERED+RY: "SGM".
     DOCUMENTS:
          OPIGINATING+REQUIREMENT:
                                    OPIG+REQ+ES+DATA+INPUT
          ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+INTELL+REPORTS.
```

```
SOURCE: ASF+PP+6+2+3.
     DATE+ENTERED: 72161.
     DESCRIPTION: "EXPERIMENT INITIALIZATION".
     ENTERED+RY: "SGM".
     DOCUMENTS:
          URIGINATING+REQUIPEMENT:
          ORIGHRER+FXPEPIMENT+INITIALIZATION
          ORIGINATING+REUGIREMENT:
          ORIGOREDOPERFORMOF XPERIMENTOINITIALIZATION.
SOURCE: ASE+PP+6+3+1.
     DATE+ENTERED: 72181.
     DESCRIPTION:
               "SIMULATE MOVING TARGET INDICATOR (MTI)
     SENSOR SYSTEM".
     ENTERED+BY: "SGM".
SOURCE: ASE+PP+6+3+1+1.
     DATE+ENTEREDI 72181.
     DESCRIPTION: "MODEL MTI PLATFORM(S)".
     FNTEPED+RY: "SGM".
     DOCUMENTS:
          ORIGINATING+REUNIREMENT: ORIG+RER+GENERATE+DME
          URIGINATING+REQUIPEMENT: UPIC+PEC+GENERATE+INS
          ORIGINATING+REQUIREMENT: ORIG+REG+GENERATE+NOISE.
SOURCF: ASE+PP+6+3+1+2.
     PATE+ENTERED: 72181.
     DESCRIPTION: "MODEL MTT SENSORS".
     ENTERED+RY: "SGM".
     DOCUMENTS:
          ORIGINATING+REGHIREMENT: OPIG+RER+MTT+RADAR+BEAM+COVERAGE
          ORIGINATING+REQUIREMENT: ORIGHRER+MTI+RECEIVER+DETECTION
          ORIGINATING+REQUIREMENT:
                                    OPIG+PEG+MTI+PECEIVER+S
          OPIGINATING + REQUIPE MENT:
          ORIGHRER+MTI+SHADO + ED+TARGET+REMOVAL
          OPIGINATING+REGUIREMENT:
          OPIG+REG+MTI+TERRAIN+OR+FOLIAGE+SHADOWING
          ORIGINATING + REQUIREMENT:
          UPIG+RE9+MTI+VELOCITY+SHADOW+REMOVAL
          OPIGINATING+REQUIPEMENT:
          OPIG+RED+TARGETS+WITHIN+BEAM+COVERAGE.
SCURCE: ASE+PP+6+3+1+3.
     DATE+ENTERED: 72181.
     DESCRIPTION: "MUTEL MTI GPS".
     ENTEREDORY: "SGM".
     DOCUMENTS:
          OPIGIMATING+HEQUIREMENT: CRIC+PER+MTT+RECEIVER+DETECTION.
SOURCE: ASE+PP+6+3+1+4.
     DATE+ENTERED: 72181.
     DESCRIPTION: "MTI FUNCTIONAL PROCESSING".
     FNTERED+RY: "SGM".
     DOCUMENTS:
          ORIGINATING+REQUIREMENT: ORIG+PEC+MTI+PECETVFR+DETECTION.
SOURCE: ASF+PP+6+3+1+5.
```

```
DATE+ENTERED: 72981.
     DESCRIPTION: "MTI DISPLAY PROCESSING".
     ENTERED+BY: "SGM".
     DOCUMENTS:
          ORIGINATING+REQUIREMENT: ORIG+REG+MTI+RECEIVER+DETECTION.
SOURCE: ASE+PP+6+3+2+1.
     DATE+ENTERED: 72181.
     DESCRIPTION: "MODEL NELS PLATFORM(S)".
     FNTEREN+RY: "SGM".
SOUPCE: ASE+PP+6+3+2+2.
     PATE+ENTERFD: 72181.
     DESCRIPTION: "HUDEL MELS SENSOR".
     FNTERED+RY: "SGM".
     DOCUMENTS:
          URIGINATING+REGHIREMENT: ORIG+REG+MTI+PECEIVER+DETECTION
          ORIGINATING+REQUIPEMENT:
                                    OPIGERERENELS-ANT
          OPIGINATING+REGUIREMENT: ORIG+REG+NELS+EMITTER+DEFAULT
          UPIGINATING+REQUIREMENT: UPIG+REQ+NELS+SENSOR+DIRECTOR
          ORIGINATING*REQUIREMENT: URIG*REG*NELS*SIGNAL*OF*INTFREST
          ORIGINATING-REQUIREMENT: OPIG-REGENELS-SIGNAL-TU-NOISE
          URIGINATING+REDHIREMENT: ORIG+PEG+MELS+TFRRAIN+SHAPOWING.
SOUPCE: ASE+PP+6+3+2+3.
     CATE+ENTERED: 72181.
     DESCRIPTION: "HODEL NELS GPS".
     ENTERED+RY: "SGM".
     MOCUMENTS:
          UPIGINATING+REGHIPEMENT:
          URIGERENEFMITTERFLOCATION FACCUFACY
          ORIGINATING+REGNIREMENT:
          OPIG+RED+MELS+CHAPSE+AND+FINE+LOCATION
          UPIGINATING+REGULIREMENT: ORIG+PER+NELS+EXTERNAL+INTERFACE
          UPIGINATING+REGUIPEMENT: OPIG+PEG+MELS+SCAM+OPTIMIZATION
          OPIGINATING + REQUIREMENT: UPIG+PEO+NELS+SIGNATURE+ ANALYSIS
          OPIGINATING+REQUIREMENT: OPIG+REQ+NELS+TARGET+ACQUISTTTON
          ORIGINATING ORFUHIREMENT: ORIGORE NONEL SOTHWEAT OF TAPLE OUR DATE
SOURCE: ASE+PP+6+3+3+1.
     DATE+ENTERED: 72181.
     DESCRIPTION: "MODEL WELS PLATFORM(S)".
     ENTERED+PY: "SGH".
SHURCE: ASF+PP+6+3+3+2.
     DATE+ENTEREU: 72181.
     DESCRIPTION: "MODEL WELS SENSOR".
     ENTERED+RY: "SGM".
SOURCE: ASE+PP+6+3+3+3.
     DATE+ENTERED: 72181.
     DESCRIPTION: "MODEL WELS GPS".
     ENTERED+RY: "SGM".
SOURCE: ASE+PP+6+3+4+1.
     DATE+ENTFHED: 72181.
     DESCRIPTION: "MODEL THAGING SENSOR PLATFORM ACTIVITY".
```

ENTERED+BY: "SGM". SOURCE: ASE+PP+6+3+4+2. DATE+ENTERED: 72181. DESCRIPTION: "MODEL IMAGING SENSOR". FNTERED+BY: "SGM". \$0URCE: ASF+PP+6+3+4+2+1. DATE+ENTERFD: 72181. DESCRIPTION: "DETERMINE PEAM COVERAGE". ENTEREN+RY: "SGM". SOURCE: ASE+PP+6+3+4+2+2. DATE+ENTERED: 72181. DESCRIPTION: "DETERMINE POSSIBLE DETECTIONS". FNTEPED+RY: "SGM". SOURCE: 45F+PP+6+3+4+2+3. DATE+ENTERED: 72181. DESCRIPTION: "GENERATE SUB-1 MAGE STATISTICS". FNTERED+BY: "SGM". DOCUMENTS: ORIGINATING+REQUIREMENT: ORIG+REQ+IS+RANDOM+NOISE
ORIGINATING+REQUIREMENT: ORIG+REQ+MELS+EMITTER+CONTROL. SOURCE: ASE+PP+6+3+4+3. DATE+ENTERED: 72181. DESCRIPTION: "MODEL IMAGING GPS". FNTERED+BY: "SOM". DOCUMENTS: DRIGINATING+REGHIPEMENT: UPIG+RE9+INTERACTIVE+TAPGET+REPORTS URIGINATING+REGUIREMENT: ORIGORE GOISOCHANGE + DETECTION + ACTIVITY UPIGINATING+REQUIPEMENT: UPIG+RED+IS+CLUSTERING+ACTIVITY UPIGINATING+REQUIREMENT: ORIG+REG+IS+SFNSUR+CONTROL ORIGINATING+REQUIREMENT: ORIGHRER+IS+THREAT+TARGET. SOURCE: ASF+PP+6+4+1. DATE+ENTERED: 72181. DESCRIPTION: "C31 SIMULATOR". ENTEREDORY: "SGM". DOCUMENTS: UPIGINATING+REGHIREMENT: URIG+REG+AUTOMATED+TAHGET+REPORTS ORIGINATING+REGULIREMENT: ORIG+REG+C31+ASF+MSG+GENERATOR ORIGINATING+RENUIREMENT: ORIG+REC+C3T+DATA+HANAGER ORIGINATING+KFONIREMENT: URIGEREGECSIEFNVIRONEMSGEGENERATUR ORIGINATING+REUNIPELENT: URIC+REQ+C31+PONTE+AND+FILTER. SOURCE: ASE+PP+6+4+2. DATE+ENTERED: 72181. DESCRIPTION: "INTELLIGENCE CENTER". FNTERED+RY: "SGM". **PUCUMENTS:** ORIGINATING+REUNIPEMENT: ORIGHREN+C3I+DATA+HFULESTS+FOR+ASE

ORIGINATING+REGUIREMENT:

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ORIGHRER+C3T+DISPLAY+REDUESTED+DATA ORIGINATING+REUNIREMENT: ORIGOREYOREVIEWOCOLLATERALOINTELLIGENCE. SOURCE: ASE+PP+6+4+3. DATE+ENTERED: 72181. DESCRIPTION: "CURRENT PLANS". ENTERED+RY: "SGM". DOCUMENTS: OPIGINATING+REUNIREMENT: OPIG+PEG+C3I+CUPRENT+PLANS OPIGINATING+REQUIPEMENT: OPIG+REQ+C31+REQUEST+ASE+DATA URIGINATING+REUHIREMENT: URIG+REU+C31+PEVIEW+INTFLL+DATA. SOURCE: ASE-PP+6+4+4. DATE+ENTERED: 72181. DESCRIPTION: "CURRENT OPERATIONS". ENTERED+BY: "SGM". DOCUMENTS: ORIGINATING+REQUIPEMENT: URIGHPER+C3T+EXECUTE+STRIKE ORIGINATING+REQUIREMENT: URIGEREDECSIEMUNIFYEMISSIONS ORIGINATING + REGUIREMENT: URIGHRECHOSI+THREAT+ELIMINATION UPIG+PEO+C3T+THREAT+EVALUATOR ORIGINATING+REWHIREMENT: ORIGINATING+REGUIREMENT: ORIGHRER+CSI+THREAT+EVAL+REACTION UPIGINATING + RENHIPEMENTS ORIGHRESHOSIHUPDATE+CMORS+REGUIREMENTS. SOURCE: ASF+FP+6+5+1. DATE+ENTERED: 72181. DESCRIPTION: "TIMING, CONTROL, AND PERFORMANCE DATA COLLECTION", ENTERED+BY: "SGA". DOCUMENTS: ORIGINATING+REGUIREMENT: ORIG+REG+TC+DISPLAY+AND+CONTROL ORIGINATING+REGHIREMENT: ORIGHRER+TC+MESSAGES+TO+CONTROL+AND+DISPLAY ORIGINATING+REGUIREMENT: OPIG+REG+TC+MESSAGE+CHECK

SOURCE: ASE+PP+6+5+2. DATE+ENTERED: 72881.

DOCUMENTS:

ORIGINATING+REQUIPEMENT: ORIGHRED+GENERATE+SUB+IMAGE+STATS ORIGINATING+REWHIREHENT: ORIG+PER+TC+CYCLE+START URIGHREDATCAMESSAGEASTART ORIGINATING+REQUIREMENT: ORIGINATING + REQUIREMENT: ORIGHREQUIC+OPERATUR ORIGINATING+REBUIREMENT: ORIGHRER+TC+SYNC.

SUBNET: S+1+CHECK+MELS+SFNSOP+STATUS+SUB. DATE+ENTERED: 12082.

DESCRIPTION:

MACTIVATES OPERATION OF NELS SENSOR AND HANDLES DETERMINATION OF SENSOR STATUS".

ORIGINATING+REDUIREMENT: ORIG+RED+TC+MFSSAGE+FILTER URIGINATING+REQUIPEMENT: OPIG+REQ+TC+MESSAGE+SEPARATOR.

ENTERED+BY: "JJF-NELS".

REFERS TO:

A+17+NELS+SENSUR+STATUS+ALPHA ALPHA: DATA: D+136+SENSOR+MCDE+OF+UPERATION+UATA

```
DATA: De140+TBD+DATA
         ENTITY+TYPE: ET+3+MELS+FLIGHT+ET
         ENTITY+TYPE:
                       ET+5+NEI.S+PPE+BPIEFED+SNI+ET
         ENTITY+TYPE: ET+8+NELS+PRE+BRIFFED+ANI+ET
         EVENT: E+1+ACTIVATE+SEMSOR+EVENT
         OUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NELS.
    TRACED FROM:
         ORIGINATING+REQUIPEMENT: ORIG+PER+NELS+EXTERNAL+INTERFACE.
    REFERRED BY:
                 RETERANDLE + NELSES SENSOR + AND + GPS+PROCESSING+R+NET
         RONET:
         RENET: REZEMODELENELSESENSORESYSTEMERENET.
    STRUCTURE:
        SELECT ENTITY+TYPF: FT+3+NELS+FLIGHT+ET SUCH THAT
        (0+140+160+0414 = TPUE)
        SELECT ENTITY+TYPF: FT+5+NELS+PRE+RRIEFED+SOI+ET SUCH THAT
        (D+140+TBP+DATA = TPUE)
        SELECT ENTITY+TYPF: FT+8+NELS+PRE+RRIEFED+ADI+ET SUCH THAT
        (D+140+TBD+DATA = TRUE)
       ALPHA: A+17+NELS+SFNSOR+STATUS+ALPHA
       ĎΩ
          OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS
        AND
          CONSIDER DATA: D+136+SENSOR+MODE+OF+OPERATION+DATA
          IF (IDLE)
          OR (SOI+SURVEILLANCE OR SOI+SEARCH OR *OI+SURVEILLANCE
                                                 OR ADI+SEARCH)
             EVENT: E+1+ACTIVATE+SENSOR+EVENT
          END
          TERMINATE
          PETURN
        END
    END.
SUBNET: S+2+CO+NELS+OPERATIONAL+CONTROL+SUR.
    DATE+ENTERED: 11882.
    DESCRIPTION: "CUNTROL OF GPS, SENSOR AND PLATFORM PROCESSING".
    ENTEPED+RY: "JJF-NELS".
    REFERS TO:
          ALPHA: A+13+NELS+PLATFORM+LUCATION+MSG+ALPHA
          ALPHA: A+20+NELS+SURVETLLANCE+AND+TRACK+MSGS+ALPHA
          OUTPUT+INTERFACF: TO+TT*ING+AND+CONTPOL+FROM+NELS
          SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB
          SUBNET:
                  S+4+MODEL+NELS+PLATFORM+SUB
          SUBNET:
                  $+5+MODEL+NELS+SENSOR+SUB.
     TRACED FROM:
         URIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
    PEFERRED BY:
          RENET: RELEMANDLEENELSESSINGERANDEGPSEPROCESSINGERENET.
     STPUCTURE:
        SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
        DO
          PETURN
                  A+13+NFLS+PLATFORM+LOCATION+MSG+ALPHA
           OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
        AND
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SURNET: S+5+MODFL+NELS+SENSOR+SUB
           SURNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB
           ALPHA: A+20+NFLS+SUFVEILLANCE+AND+TRACK+MSGS+ALPHA
           OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
       END
    END.
SUBNET: S+3+MODEL+NELS+GPS+PPOCESSING+SUB.
     DATE+ENTERFO: 11862.
     DESCRIPTION: "NELS GOOUND PROCESSING STATION (GPS) PROCESSING".
     ENTEREPHRY: "JJF-NELS".
     REFERS TO:
          ALPHA: 4+06+MELS+COARSE+LOCATION+ALPHA
          ALPHA: A+07+NELS+FINF+LOCATION+ALPHA
          ALPHA: A+OF+NELS+FREQUENCY+SCAN+CPTIMIZATION+ALPHA
          ALPHA: A+12+NELS+PERFURM+SIGNATURE+ANALYSIS+ALPHA
          ALPHA: A+21+NELS+TARGET+ACOUTSITIOM+ALPHA
          ALPHA:
                 A+23+NELS+THREAT+TABLE+UPDATE+ALPHA
          DATA: D+140+TBD+DATA
          ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          OPIG+RER+NELS+COARSE+AND+FINE+LOCATION
          ORIGINATING+REQUIREMENT: ORIGHPED+NELS+SCAM+OPTIMIZATION
          ORIGINATING+RENNIPEMENT: GRIG+PER+NELS+SIGNATURE+AMALYSIS
          OPIGINATING+REQUIPEMENT: OPIG+REQ+NELS+TARGET+ACOUISITION
          ORIGINATING+REQUIREMENT: OPIG+PER+NELS+THREAT+TABLE+UPDATE
     PEFERRED BY:
          SUBNETS
                   S+2+CO+NELS+CPFRATIONAL+CONTPOL+SUB.
     STRUCTURE:
        ALPHA: A+21+NELS+TARGET+ACHUISITION+ALPHA
        ALPHA: A+O6+4ELS+COAPSE+1.0CATION+ALPHA
        ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
        ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYRIS+ALPHA
        D.C
           SELECT ENTITY + TYPE: ET+1+NELS+EMISSION+THREAT+ET
           SUCH THAT (D+140+TFD+DATA = TRUE)
           ALPHA: A+23+NFLS+THPEAT+TABLE+UPUATE+ALPHA
                  - A+OB+NFLS+FREGUENCY+SCAN+OPTTMTZATJON+ALPHA
           ALPHA:
       E N.D
        RETURN
     END.
SUBNET: S+4+ MODEL+1 ELS+PLATFORM+SUB.
     CATE+ENTERED: 11982.
     RESCRIPTION: "NELS PLATFORY OPERATIONS".
     FNTEREDORY: "JJF-WELC".
     PEFERS TO:
          ALPHA: A+01+DMF+INS+NUTSF+RENERATION+ALPHA
          ALPHA: A+UP+GENEPATE+LME+ALPHA
          ALPHA: 4+03+GENERATE+I*S+ALPHA
          DATA: 7+140+THP+PATA
          EMTITY+TYPE: ET+3+FELS+FLIGHT+FT.
     TRACED FROM:
```

```
ORIGINATING + REQUIREMENT:
                                   OPIGHPERHAREMERATEHUNE
          ORIGINATING+REQUIREMENT:
                                   OPICERECEGENERATE + 148
          ORIGINATING + REGULPEMENT:
                                   UPIC+PEC+GENERATE+NOISE
          UPIGINATING+REGUIPEMENT:
          URIGHRENHERATEHPLATFORMAMEASUREMENTS.
     REFERRED BY:
                  S+2+DO+NFLS+CRERATIONAL+CONTROL+SUR.
          SUBNET:
     STRUCTURE:
       SELECT EMILITY-TYPE: FI+3+NELS+FLIGHT+ET SUCH THAT
        (D+140+THP+PATA = TRUE)
        ALPHA:
               A+02+GENERATE+DYE+ALPHA
        ALPHA:
               A+03+GENEPATE+ INS+ALPHA
        ALPHA: A+01+DME+TNS+MOISE+GEMEGATIOR+ALPHA
       RETURN
     END.
SUBNET: S+5+MODEL+NELS+SENSOR+SUM.
     PATE+ENTERED: 11882.
     DESCRIPTION: "MELS SENSOR ALTIVITIES".
     ENTEREDERY: "JJF-NFLS".
     REFERS In:
          ALPHA: A+05+NELS+APEA+OF+INTEHEST+FILTER+ALPHA
          ALPHA: A+18+NELS+SIG! AL+CF+INTEREST+FILTER+ALPHA
          ALPHA: A+19+NELS+STG' AL+TO+NOISE+DETECTABILITY+ALPHA
          ALPHA: A+22+NELS+TERFATN+FOLTAGE+SMADO4ING+ALPHA
          DATA: D+140+THR+PATA
          ENTITY+TYPE: ET+2+"ELS+E"ITTER+GROUND+TRUTH+ET
         ENTITY+TYPE: ET+5+1 ELS+PRE+84IEFEU+801+ET
         ENTITY+TYPE: ET+6+NEL5+VFHICLE+CHARACTERTSTICS+ET
         ENTITY TYPE: ET+7+NFLS+NFATHER+ET
         ENTITY+TYPE: ET#R+NELS#PRE#BRIFFFD#ANI#ET
         ENTITY+TYPE: ET+9+SIGNAL+NCISE+CANDIDATE+TARGETS+ET.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+RED+MELS+ADI
          ORIGINATING+REUDIREMENT: ORIG+RED+NELS+EMITTER+DEFAULT
          ORIGINATINGEREWNIPEMENT: URIGERENEUSESTGNALEOFEINTEREST
          ORIGINATING*REGHIPEMENT: ORIG+REG+NELS+SIGNAL+TO+NOISE
         ORIGINATING*REGNIPE*ELT: ORIG*REC*NELS*TERRAIN*SHADUWING.
     REFERRED BY:
                 S+2+DU+NFLS+CPEHATIUNAL+CUNTROL+SUR.
          SHBMET:
     STRUCTURE:
        SELFOT FNTITY+TYPF: FT+6+NFLS+VFHICLE+CHARACTERISTICS+ET
        SUCH THAT (D+140+THD+DATA = TRUE)
        SELECT ENTITY+TYPE: FI+2+NELS+EMITTER+GROUND+TPUTH+ET
       SUCH THAT (De140+TED+PATA = TRUE)
       ALPHA: A+1P+NELS+SIGNAL+OF+INIFFEST+FILTER+ALPHA
       SELECT ENTITY+TYPE: FT+5+NELS+PRE+RRTEFED+SOT+FT SHCH THAT
        (D+140+TSD+DATA = TRUE)
        ALPHA: A+05+NELS+APEA+CF+IMTERFST+FILTFR+ALPHA
        SELFCT ENTITY+TYPF: FT+8+NFLS+PHF+PRTEFED+AUT+FT SUCH THAT
        (D+140+THD+PATA = TPUE)
       SELECT ENTITY GTYPE: FT+7+NFLS+WEATHER+FT SHCH THAT
        (D+140+TbD+DATA = TRUE)
        ALPHA: A+19+NELS+SIGMAL+TO+NOISE+DETECTABILITY+ALFHA
       SFLECT ENTITY+TYPF: FT+9+SIGNAL+NUISE+CANDIUATF+TARGETS+ET
       SUCH THAT (D+140+TUD+DATA = TRUE)
        ALPHA: A+22+NELS+TERPAIN+FOLTAGE+SHADUWING+ALPHA
```

RETURN

END.

SUBSYSTEM: SS+1+REST+UF+ASE.

DESCRIPTION: "DUMMY MODEL OF ASET SYSTEM".

CONNECTED TO

INPUT+INTERFACE: INTO+NELS+SENSOR

OUTPUT+INTERFACE: TO+ FIMING+AND+CONTROL+FROM+NELS.

[RADX COMMAND=

END RADY

JXX 002 FUNCTION RADX COMPLETED. **********************

STOP.

JXX 007 PEVS COMPLETED: NORMAL TERMINATION.

DAX 007 YOUR NEW DATA MASE IS ON TAPEZ, DAT.....

{DELETE=W-FILNUTUEL, error deleting DISKbUSER1: [REVS.B5] NAME.*;*

.PMS-E-FNF, file not found

REVS job terminated at 24-MAR-1983 18:14:29.41

Accounting information:

Buffered I/O count: 198 Feak working set size: 512

Ofrect I/O count: 1671 Peak page file size: 4595
Page faults: 1190490 mounted volumes: 0

Elensed CPU time: 0 01:58:29.37 tlapsed time: 0 05:27:17.19

APPENDIX B

DESIGN OF THE NELS SUBSYSTEM

NELS DESIGN

NELS FROM RSL

ASSUMPTIONS

RSL is a complete and accurate description of NELS requirements.

The SELECTion of appropriate information is incorporated in the process blocks since there is in every case only one ENTITY which meets the selection criteria.

00			NELS	SEN	SOR	SYSI	<u>EM</u>
DOCA	SE ASET 3 NAME	•					
STOP	1	T					
	NELS	1000	CHECK	NELS	SEN	SOR S	TATUS
ST:	1	D	OCA MS(SE 3 Nf	ASE AME	Τ	
3000 RESET NELS	STSINITIE	CARTO UPDATES	COMMANDER'S REQUIREMENTS	PROCESS PRIORITIZED RIORITIZED DIRECTIONS	MODIFIED TASK	ORBIT ODIFICATIONS	
3000	4000 MAKE SENSOR REQUE	5000 UPDATE CARTO	SOOO PROCESS C NELS COMMANDER'S REQUIREMENTS RE	7000 PROCESS NELS PRIORITIZED SENSOR DIRECTIONS	8000 MODIFY NELS TASK	9000 MODIFY NELS ORBIT MO	4100 PROCESS NELS REQUESTED DATA

1000 CHECK NELS SENSOR STATUS

1100 DO NELS SENSOR STATUS

1200 SEND MESSAGE TO TIMING AND CONTROL

SENSOR MODE OF OPERATION = IDLE

F

(NULL)

1300 DO NELS OPERATIONAL CONTROL

1000 CHECK NELS SENSOR STATUS 1300 DO NELS OPERATIONAL CONTROL

1310 MODEL NELS PLATFORM

1320 SEND NELS PLATFORM LOCATION MESSAGE

1330 MODEL NELS SENSOR

1340 MODEL NELS GPS PROCESSING

1350 SEND NELS SURVEILLANCE AND TRACK MESSAGES

1310 MODEL NELS PLATFORM

1311 GENERATE DME

1312 GENERATE INS

1313 GENERATE DME AND INS NOISE

1330 MODEL NELS SENSOR

1331 FILTER NELS SIGNAL OF INTEREST

1332 FILTER NELS AERA OF INTEREST

1333 CHECK NELS SIGNAL TO NOISE DETECTABILITY

1334 CHECK NELS TERRAIN FOLIAGE SHADOWING

1340 MODEL NELS GPS PROCESSING

1341 DO TARGET ACQUISITION

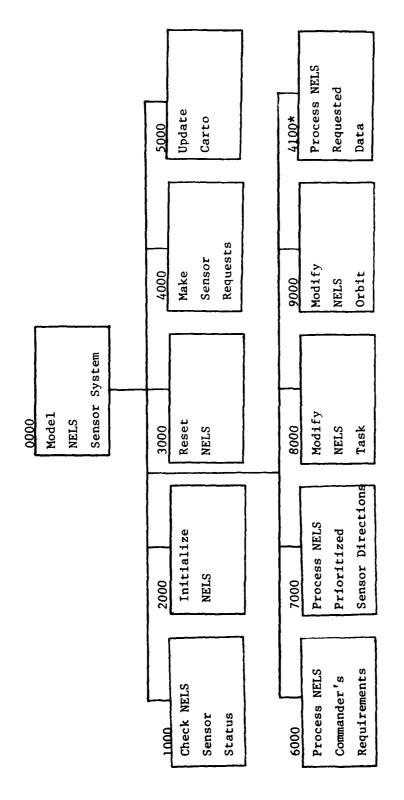
1342 DO COARSE LOCATION

1343 DO FINE LOCATION

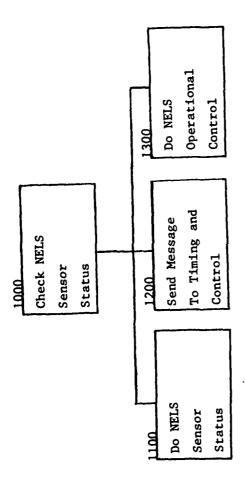
1344 PERFORM SIGNATURE ANALYSIS

1345 UPDATE THREAT TABLE

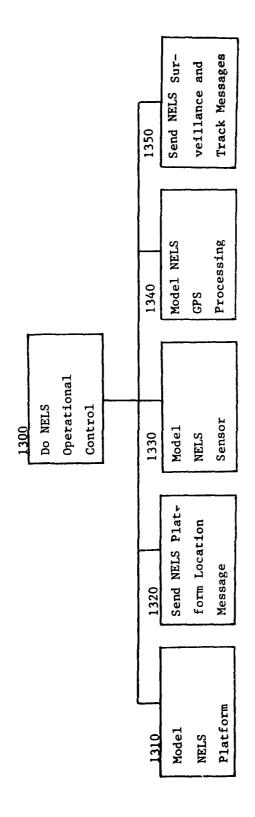
1346 OPTIMIZE FREQUENCY SCAN

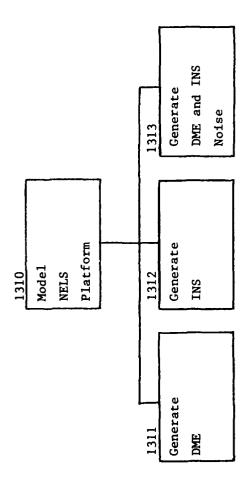


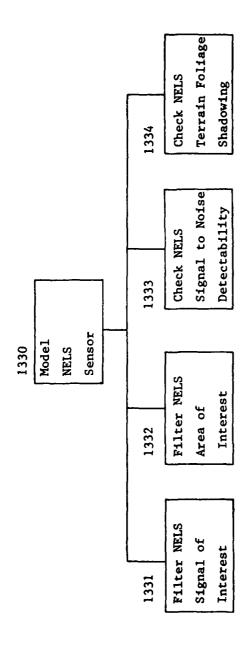
numbering convention allows. It is related to module 4000 but is not a sub-function of 4000. * This module is numbered 4100 because there are more modules required by RSL than the

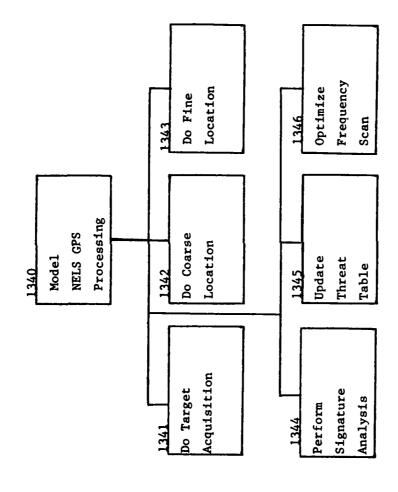


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DATA NAME	VALUES	I	! ! R !	X	MEANING
_	Stop Unit and Environment		0000*		Name (Route Code) of incoming message
	Carto Updates		[]]	[]
	Commander's Requirements		! !		
	Prioritized Sensor Directions		 		
	Modified Task				
	Orbit Modifications		! !	 	
	Requested Sensor Data		[
Sensor Mode of	ï	1100	1000*	1100	Mode of operation of sensor platform

* VCLR

NELS DESIGN

NELS FROM SPEC

ASSUMPTIONS

Emitter characteristics table is already there. Contains: bandwidth, power level, modulation type of simulated emitter.

Weather grid is already there. Contains: weather conditions of geographic area.

On page 18 Terrain Foliage Shadowing requires that at least two sensors receive a transmission. In the previous process block (S/N detectability, 1330) there is the same requirement, the test is performed in 1330. If the test is false the emitter is dropped, therefore, it should not go to the terrain foliage block. Hence a test in this block would be redundant.

0000 NELS INTERFACE HANDLER

DO WHILE SIMULATION EXECUTING				
11		111171	ATMIN AMTANI	DV/DALIM TILA
16 II 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21 IX I			F.AF.Lallala Price
	14 II I	WILLIE	- 7	
DO MITUE STINGHTION EVENOTING		711111111	OTHORNITOR	CVECOTING

DOCASE MESSAGE NAME

				,
	DI FR	HAN	999 FRROR HANDI FR	666
2000 EXTERNAL INTERFACE HANDLER SENSOR SYSTEM STATUS	HANDLER	TERFACE	XIERNAL IN	2000 E
SENSOR REQUESTS MSG	HANDLERSENSOR	INTERFACE	EXTERNAL IN	2000 E
INTERFACE HANDLERTASKING RESPONSE MSG	HANDLER	IERFACE	2000 EXTERNAL IN	2000 E
FREQUENCY SCAN T UPDATE MSG	ERNAL	2000 EXTERNAL NTERFACE HANDLE	998 UPDATE 2000 EXT DATA BASE INTERFACE	998 DAT
TYPED EMITTER R REPORT MSG	IERNAL HANDLER	2000 EXT NTERFACE	998 UPDATE 2000 EXTERNAL DATA BASE INTERFACE HANDLER	998 DAT
BASECARIO UPDAIE MSG	BASE	DHTH	998 UPDATE	968
BASE REQUIREMENTS FOR SENSOR MSG	BASE	DATA	UPDATE	988
BASEsensor TASKS MSG	BASE	DATA	UPDATE	866
BASE REQUESTED SENSOR DATA	BASE	DHTH	998 UPDATE	968
HANDLER DETECTABLE EMISSIONS MSG	HANDLER	INTERFACE	INTERNAL IN	1000 I
1000 INTERNAL INTERFACE HANDLERPLATFORM ACTIVITY MSG	HANDLER	TERFACE	NIERNAL IN	1000 I
INTERFACE HANDLERPLATFORM CONTROL MSG	HANDLER	TERFACE	1000 INTERNAL IN	1000 I
998 UPDATE DATA BASESCENARIO MSG	BASE	DATA	UPDATE	866

INTERNAL INTERFACE HANDLER 1000 DOCASE MESSAGE NAME DETECTABLE EMISSIONS MSG PLATFORM CONTROL MSG PLATFORM ACTIVITY 1400 NELS GPS 999 ERROR HANDLER NELS PLATFORM 300 MODEI SENSORS NELS

2000 EXTERNAL INTERFACE HANDLER

HSE TRANSMIT MSG SUBSYSTEM 2100

998 UPDATE DATA BASE

	OCF	ISE	MESS	AGE	NAM	IE	
SCENARIO MSG	REQUESTED SENSOR DATA MSG	SENSOR TASKS MSG	C3I REQUIREMENTS FOR SENSOR MSG	TE CARTO FILE UPDATE MSG	TYPED EMITIER REPORT MSG	998.7 UPDATE FREQ. FREQUENCY SCAN SCAN TABLE	
UPDATE EMITTER ACTIVITY SCENARIO GROUND TRUTH FILE	UPDATE EMITTER ACTIVITY GROUND TRUTH FILE	998.2 UPDATE SOI/AOI FILES	998.3 UPDATE FLIGHT PROFILE	998 UPDF CARTO	998,6 UPDÁTE THREAT TYPED EMITTER TABLE	ATE FREQ. Table	999 ERROR HANDLER
998.1 UPDATE EN GROUND TF	998.1 UPDATE EN GROUND TE	998,2 UPDA FIL	998.2 UPDATE SO1/AO1 FILES	998.5 UPDATE HYPSOGRAPHIC FILE	998.6 UPDF TAE	998.7 UPD SCAN	999 ERROF

1200 MODEL NELS PLATFORM

1210 DME

1220 CACULATE INS

1230 NOISE GENERATION

1210 DME

1211 READ PLATFORM CONTROL MSG

1212 ACCESS FLIGHT PROFILE FILE

1213 CACULATE DME

1230 NOISE GENERATION

1231 ADD ERROR TO DME AND INS

1232 FORM PLATFORM ACTIVITY MSG

997 ROUTE MSG TO INTERFACE HANDLER

1300 MODEL NELS SENSORS 1350 ACCESS EMITTER ACTIVITY GROUND TRUTH SENSOR <> PASS SENSOR = PASSSENSOR PASS 1330 SIGNAL/NOISE DETECTABILITY TERRAIN FOLIAGE SHADOWING (NULL) 1360 GET RECORD SENSOR = PASS 1380 FORM NULL DETECTABLE (NULL) EMISSION MSG

1310 SIGNAL OF	INTEREST						
1311 READ PLATFORM	1 ACTIVITY	MSG					
1312 ACCESS FRE	QUENCY S	CAN					
1313 ACCESS EMITTER CHARACTERISTICS FILE							
EMITTER WITHIN SENSORS T BANDWIDTH F							
SOI FILE T\ AVAILABL							
1315 ACCESS SOI FILE EMITTER	1316 LACE IITTER C.T.	NULL)					
T MEETS SOI /F SOI							
1316 PLACE EMITTER ON C.T. LIST SET SENSOR = PASS	SET SENSOR = PASS						

1320 AREA OF INTEREST

1321 ACCESS AOI FILE

EMITTER OUTSIDE AOI

T

996 DROP EMITTER FROM C.T. LIST

SET SENSOR = PASS

1330 SIGNAL/NOISE DETECTABILITY 1331 DETERMINE NUMBER OF RECEIVERS RECEIVERS >= 2 1332 ACCESS WEATHER GRID EMITTER > THRESHOLD 996 DROP SET SENSOR FROM PASS C.T. LIST

1340 TERRAIN FOLIAGE SHADOWING

1341 ACCESS HYPSOGRAPHIC FILE

1342 FORM SIGNAL VECTOR

VECTOR INTERCEPTED

T

996 DROP EMITTER FROM C.T. LIST

SET SENSOR = PASS 1343 FORM DETECTABLE EMISSIONS MSG

SET SENSOR = PASS

997 ROUTE MSG TO INTERFACE HANDLER

1400 NELS GPS

1400 NELS 6FS	
1480 READ EMISSIONS MS	3G
NOT NULL DETECTABLE EMISSIC MSG	IN /FI
1470 GET AN EMISSION	, .
DO WHILE EMISSION AVAILABLE	
1410 TARGET ACQUISTION	
1420 COARSE LOCATION	
1430 FINE LOCATION	
1440 SIGNATURE ANALYSIS	
1450 THREAT TABLE UPDATE	
1460 FREQUENCY SCAN OPTIMIZATION	
1470 GET AN EMISSION	

1410 TARGET ACQUISTION

1311 READ PLATFORM ACTIVITY MSG

1411 ESTIMATE PARAMETERS

1412 ESTIMATE TIME DIFFERENCE OF ARRIVAL

1413 ESTIMATE DIFFERENTIAL DOPPLER

1420 COARSE LOCATION

1421 DETERMINE APPROXIMATE EMITTER LOCATION

1422 CACULATE ERROR

1430 FINE LOCATION

1431 ACCESS EMISSION THREAT TABLE

1432 INCREMENT CORRELATION TIME

DO UNTIL END OF TRANSMISSION OR CEP < THRESHOLD

1433 ADD ERROR TO LOCATION

1434 FORM REFINED EMITTER PARAMETERS MSG

1440 SIGNATURE ANALYSIS

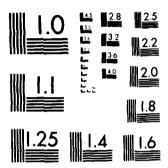
1441 TAG ON TRAFFIC TYPE CODE

1442 FORM TYPED EMITTER REPORT MSG

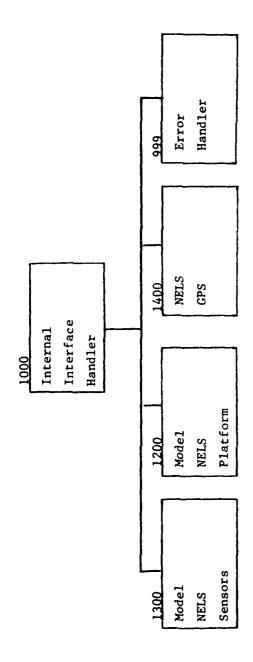
997 ROUTE MSG TO INTERFACE HANDLER

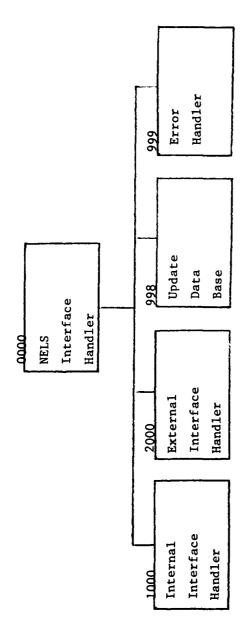
1460 FREQUENCY SCAN OPTIMIZATION HIGH PRIORITY THREAT EMITTER 1461 FORM FREQUENCY SCAN UPDATE MSG 997 ROUTE MSG TO INTERFACE HANDLER

3/6 SREM (SOFTWARE REQUIREMENTS ENGINEERING METHODOLOGY) EVALUATION VOLUME 2..(U) MARTIN MARIETTA DENVER AEROSPACE CO A STONE ET AL. FEB 84 MCCR-83-553-VOL-2 RADC-TR-83-314-VOL-2 F30602-80-C-0272 F/G 9/2 AD-A141 632 ΝŁ UNCLASSIFIED

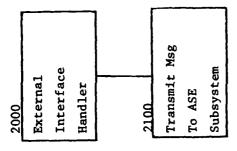


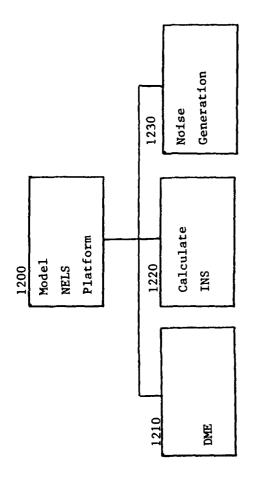
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

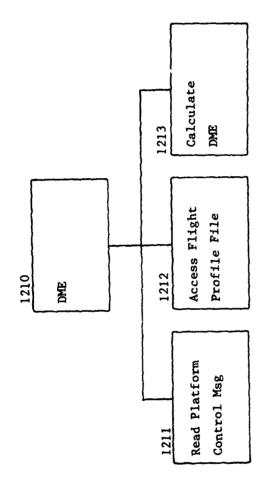




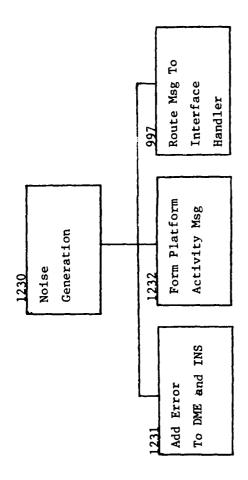
~ ...

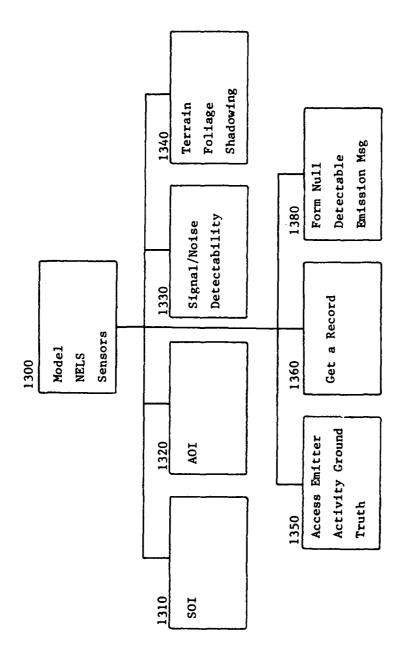




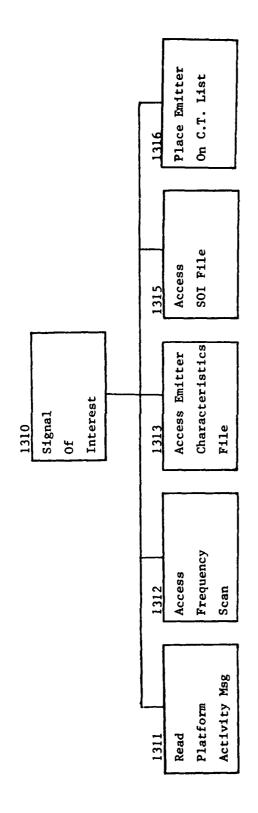


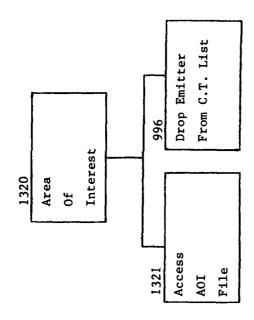
*

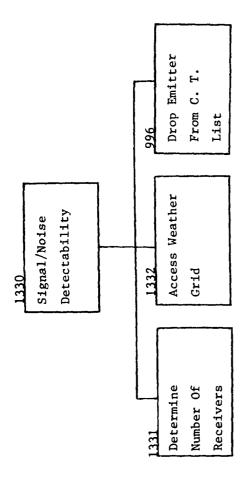




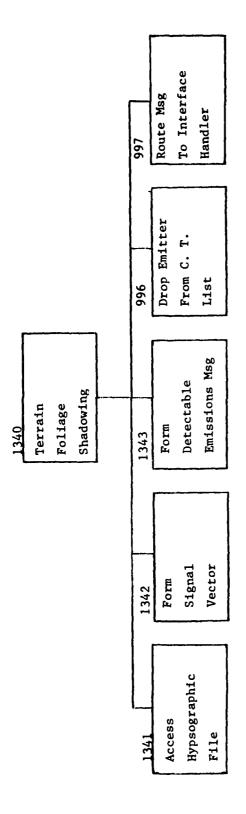
÷ 1...

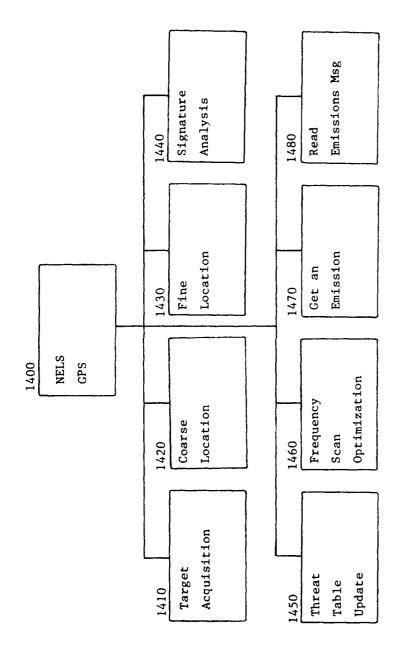


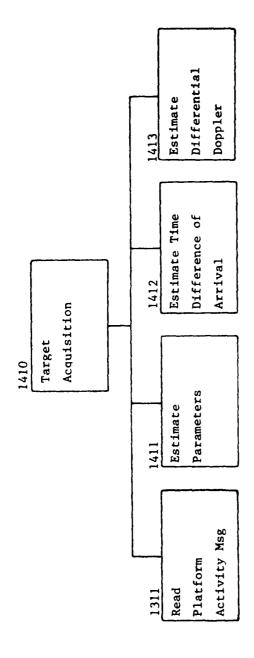


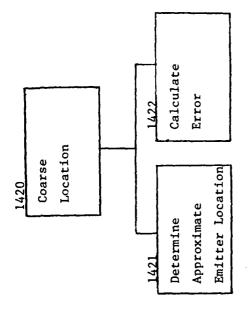


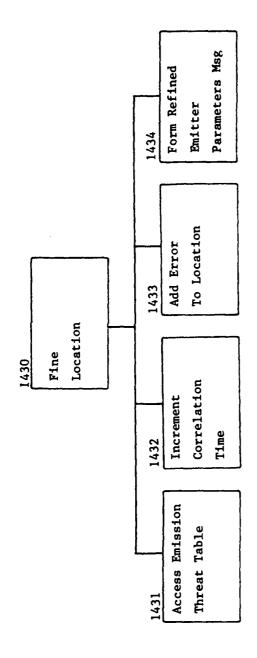
A CONTRACTOR OF THE STREET, AND ASSESSMENT ASSESSME

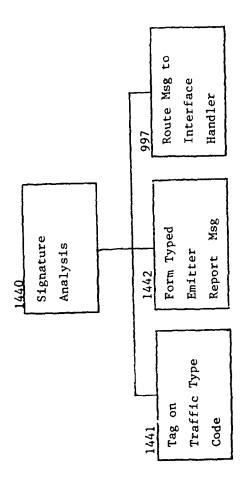


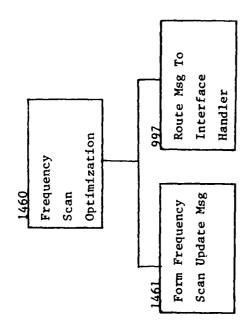




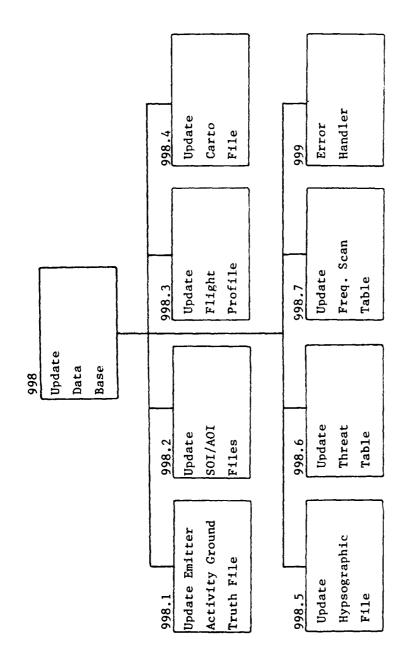








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DATA NAME	VALUES	I	l R	 x 	 MEANING
 Emitter > Threshold	 True False		 1330* 	1332	 Emitter exceeds weather threshold
Emitter Meets SOI	True False		1310*	1315	Emitter meets signal of interest
Emitter Outside	True False		1320*	 1321	Emitter is out of the area of interest
Emitter within Sensors Band- width	True False		1310*	 1313	
 Emission Available 	True False		1400*	 1470 	 Continue process while there is a detectable emission on list
End of Trans- mission	False True		1430*	1431	End of the emitter transmission
 High Priority Threat Emitter	True False		1460*		
SOI File Available	True False		1310*		Signal of interest file available
Receivers	Integer		1330*	1331	Number of emitter receivers
Record Available	True False		1300*	1360	Filter sensors while an emission is available
Simulation Executing	True False		0000*		 Process executes while there is a simulation
Null Detectable Emission Msg	True False		1400*	1480	
Vector Intercepted	True False		1340*	1342	
 	 	' I	 		

*VCLR Available

DATA NAME	VALUES	I	R	 X 	MEANING
Message Name	Typed Emitter Report Msg	 	 0000* 	 	
	 Carto Update Msg	! ! !	998* 0000* 998*	 	
	C3I Requirements For Sensor Msg	 	0000*	[
	 Detectable Emissions Msg	: ! !	0000* 1000*	! 	
	Frequency Scan Update Msg	1	0000* 998*	<u> </u> 	1
	 Platform Activity Msg	! 	0000* 1000*	! [1
	Platform Control Msg]]	0000* 1000*	! !	1
1 	Requested Sensor Data Msg	(0000* 998*	(! !	
	Scenario Msg	İ !	0000* 998*	[1
{ -	Sensor Requests Msg	! 	0000*	! 	!
 	Sensor System Status Msg	<u> </u> 	0000*		1
 	Sensor Tasks Msg	! 	0000* 998*]]	1
<u> </u> 	Tasking Response	1	0000*	1	1
 CEP <threshold </threshold 	 False True	 	1430*	1431	Emitter is below Threat Threshold
Sensor	Pass No Pass	 	1300* 	1300* 1310* 1320* 1330* 1340*	Has the sensor been successfully filtered
	1 		1		1

^{*} VCLR Available

APPENDIX C

NELS RADX ANALYSIS NELS DATA ANALYSIS

```
24-447-1983 17:14
                                                                  Page 3
RUNREVSH. ( 06:9
    24MAR-63
                                        PASELINE VERSION = 14.1, (DATE=24MAR=83,
                                REVS
   12:47:55
                        XX OUD
                                 RADX.
  x 12:50:08
              REVSIN
                                FUNCTION PARX
                                                   IMITIATED.
                        44 001
 M 12:50:08
                                 FF4P.
  x 18:13:51
              REVSIN
                                 WHIMEER OF ERPOR MESSAGES ISSUED BY PADX = 66
                        an not
    14:13:51
                                 FURCTION PANK
                                                   COMPLETED.
   14:13:51
                         XX 005
                                 STOP. HEVS COMPLETED: NORMAL TERMINATION.
  x 18:13:52
              REVSIT
                         44 007
   14:13:53
                                YAUTO WE HATA BASE IS ON TAPEZ PAT .....
                         XX 407
    18:13:53
                BASELINE VERSION = 10.1. (DATE=24449-83. TIME=12:47:55)
 XX 000
        REVS
         RADX.
                           INTITATED.
         FUNCTION RADX
0 X X 0 0 1
                                       TIME = 12:51:45 ****
  **** ENTER RADY, PATE = 24MAR-33,
 TRADY COMMANDE
 SET A * P+NET.
 SET COUNT = 2
 TRACK COMMANDS
 ANALYZE A HSING RETA.
    RENET: RETEMANDLE MIET SESENSOFEANDERMEEPROCESSINGERENET
       PEFERS IN
                   S+1+CHECK+NELS+SENSOR+STATUS+348
           SUBNET:
              PEFEPS TO
                 ALPHA: A+17+HELS+SFNSUP+STATHS+ALPHA
                    IMPUTS
                       FILE: FARAFLIGHTARHOFTLFAFILE
                          CONTAINS
                                    CHOUSELIGHTHWAYPGTNTHX+PATA
                             DATA:
                                    P+042+FLIGHT+#AYPCTNT+Y+DATA
                             DATA:
                                    C+C43+FLTGHT+HAYPUTNT+7+DATA
                             DATA:
                       FILE: FARDEWELSERSTERENHAUTEFILE
                          CONTAINS
                                   OATA:
                        nongatiel sopreburieff Deanief thteri Geopiteriaenata
                                          DATA:
                              DATOTALEL SAFREABRIEFEDAADIALONERALEFTAYADATA
                                          CATA:
                              NANGRAN FL SAPREAURIEFFUAANTAL NWERALFFTAYANATA
                                          : ATA:
                              DAIDOANFLISAPHEANRTEFF NA 40TAHFPERAPIGHTAXADATA
                             C+101+ AFL S+PRF+PHTEFED+ACT+-HFPEP+PIGHT+Y+DATA
                       FILE: FARIANELSAPHEARNTEFENAROTAFILE
                          COLTAI'S
                                    DOTA:
                                   T+103+MELS+PRE+HPIFFFD+SOI+EMD+FRED+DATA
                                    DATAL
                                    D+194+NFL S+PHF+SRTEFED+SOT+FRFQ+DATA
                                    DATA:
                            DAIOSA VELSANPEANRIEFENARUTAMONUL ATINAATYPEANATA
                                    SATAL
                                 DATOMANEL SAPREAFFIFF DASOLASTAPTAFREDADATA
                    NUTPHIS
                        FILE: FAR445F1 SORASTATUSAFTLE
```

CONTAINS

D+044+FREQUENCY+SCAN+PARAMETER+DATA DATA:

UATA: C+136+SENSOP+HODE+9F+UPERATION+DATA

INPUTS

DATA: C+002+ASET+MSG+DFST+DATA

DATA: DEPOSE ASET & MSGENAME & PATA
DATA: DEPOSE ASET & MSGESOUPCE & DATA

DATA: DEGOTEASPEACCEMENTAL DATA: DEGOREASPEACCEMENTAL

DATA: DEGOGEASPEACCETEDATA

```
DATAL
                  P+014+ASP+LOC+X+PATA
            DATA:
                  C+015+ASP+LOC+Y+DATA
            DATAL
                  D+916+ASP+LOC+Z+DATA
            DATA:
                  T+021+ASP+TIME+DATA
            DATA: C+922+ASP+VEL+X+DATA
            DATA: D+023+ASP+VEL+Y+DATA
            DATA: C+024+ASP+VEL+Z+DATA
            D+091+NELS+FREQUENCY+SCAN+DATA
      DATAL
      DATA:
            D+135+SENSOR+ID+DATA
   DUTPUTS
            DATA: P+002+ASET+MSG+DEST+DATA
            DATA: P+004+ASFT+MSG+NAME+DATA
            DATA: P+005+ASET+MSG+SOURCE+DATA
      DATA: D+091+NELS+FREQUENCY+SCAM+DATA
      DATA: M+135+SENSOR+ID+DATA
   FORMS
      MESSAGE: M+11+MELS+SENSUR+SYSTEM+STATUS+MSG+QUY
         MADE BY
            FILF: F+34+SENSOR+STATUS+FILF (*)
         MADE BY
                  DATA:
                        D+002+ASET+MSG+DFST+DATA
                  DATA:
                        D+004+ASET+MSG+NAME+DATA
                  DATA: D+005+ASET+MSG+SOURCE+DATA
            DATA: D+135+SENSOR+ID+DATA
DATAS
      P+136+SENSOR+MODE+OF+OPERATION+DATA
DATA: D+140+TBP+DATA
ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
   ASSOCIATES
      FILF: F+06+FLIGHT+PROFILE+FILE (+)
      FILF: F+27+PLATFORM+CONTPUL+FILE
         CONTAINS
                  DATA: D+010+ASP+ALTITUPE+DATA
                        D+012+ASP+LATITUDE+DATA
                  DATAS
                  DATA: D+017+ASP+LONGITUDE+DATA
            DATA: DEC14+ASP+LOC+X+DATA
            DATA: 0+015+ASP+LOC+Y+DATA
            DATA:
                  D+016+ASP+LOC+Z+DATA
            DATA: C+022+ASP+VEL+Y+DATA
            DATA: C+023+ASP+VEL+Y+DATA
            DATA: P+024+ASP+VEL+Z+DATA
ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+S0I+ET
   ASSOCIATES.
      FILE: F+10+NELS+CANDIDATE+TARGETS+FILE
         CONTAINS
            DATA:
                  - D+061+NELS+EMISSION+DURATION+DATA
            DATA:
            D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
            DATA: P+063+NELS+EMISSION+START+TIME+DATA
            DATA:
            D+073+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA
            DATA: D+075+NELS+EMITTER+ID+DATA
                  DATA: C+085+NELS+EMITTER+X+DATA
                  DATA: D+086+NELS+EMITTER+Y+DATA
                  DATA: D+087+NELS+EMITTER+Z+DATA
            DATAS
           D+081+FELS+EMITTFR+TRANSMISSION+FREQUENCY+DATA
            DATA: D+130+SCENARIO+GEN+ID+NUM+DATA
      FILE: F+21+NELS+PHE+BRIEFED+SOI+FILE (+)
```

```
ENTITY+TYPE: ET+R+NELS+PRE+6RIEFED+AMI+ET
   ASSOCIATES
     FILE: F+10+NELS+CANDIDATE+TAPGETS+FILE (*)
      FILE: F+20+NELS+PRE+BRIEFED+AUI+FILE (*)
EVENT: E+1+ACTIVATE+SENSOR+EVENT
OUTPUTEINTERFACE: IGHTIMINGHANDHCOMTPOLHEROMHNELS
   PASSES
      MFSSAGE:
      M+05+NELS+NDN+SURVEILLANCE+TARGET+RFPORTS+MSG+DUT
         MADE BY
            FILE: F+07+GPUUP+TARGET+LOCS+FILE
               CONTAINS
                  UATA:
                         D+048+GROUND+TARGET+LUC+X+DATA
                  DATAL
                        DE049EGROUNDETARGETELOCEYEDATA
         MADE BY
                  DATA:
                         D+002+ASET+MSG+DEST+DATA
                  DATAS
                         D+004+ASET+MRG+NAME+DATA
                  DATA: D+005+ASET+MSG+SOUPCE+DATA
                  C+045+GPS+ID+DATA
            DATA:
            DATA: D+046+GROUND+TARGET+FREQUENCY+DATA
            DATA: F+047+GROUND+TARGET+LENGTH+DATA
                  C+050+GROUNG+TARGET+VELOCITY+DATA
            DATA:
      MESSAGE:
      M+07+NELS+PLATFOPM+LOCATION+REPORTS+MSG+OUT
         MAPE BY
            FILE: F+33+SENSOP+PLATFORM+LOCATION+FILE
               CONTAINS
                         D+114+PLATFURM+LOCATION+X+DATA
                  DATA:
                  DATA:
                        DE115+PLATFOPM+LOCATION+Y+DATA
                        D+116+PLATFORM+LOCATION+Z+DATA
                  DATAL
         MARE BY
                  DATA:
                         D+002+ASET+MSG+DEST+DATA
                  DATAL
                         D+004+ASET+HSG+NAME+DATA
                  DATA:
                        D+005+ASET+MSG+SOURCE+DATA
      MESSAGE:
               M+10+MELS+SENSOR+REQUESTS+MSG+OUT
         MADE BY
                  DATA: D+002+4SFT+MSG+DEST+DATA
                  DATAL
                        D+004+ASET+MSG+NAME+DATA
                  DATA:
                        T+0U5+ASET+MSG+SOUPCE+DATA
                  D+125+PEG+DESTINATION+SENSOR+ID+DATA
            DATA:
            Diff:
                  D+126+RED+PEPORT+INFORMATION+TYPE+DATA
            DATA:
            C+127+HEG+SENSOR+TARGET+ID+DF+INTEREST+DATA
            DATA: D+135+SENSOR+ID+DATA
      MFSSAGE: M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT
       (*)
      MESSAGE:
      M+12+VELS+SURVETLLANCE+TARGET+REPORTS+MSG+DUT
         WANE BY
            FILE:
                  F+07+GPOUP+TARGET+LOCS+FILE (*)
         MADE BY
                  DATA:
                         D+002+4SET+MSG+DFST+DATA
                  DATA:
                         D+004+ASET+MSG+NAME+DATA
                  OATA:
                         D+005+ASET+MSG+50UPCE+DATA
                   C+045+GPS+TD+DATA
            DATES
            DATAL
                   PANAKARROUNDATARGETAFPFRUENCYADATA
            TATAL
                   THOUTHGROUNDATARGETALENGTHADATA
            DATAL
                   P+950+GROUND+TARGET+VELOCITY+DATA
```

```
MESSAGE:
                      M+13+NELS+TASKING+RFSPONSFS+MSG+OUT
               MADE BY
                        DATAS
                               D+002+ASET+MSG+DEST+DATA
                        DATA:
                               D+004+ASET+MSG+NAME+DATA
                        DATA:
                               D+005+ASET+MSG+SOURCE+DATA
                  DATA:
                        D+138+TASKING+RESPONSE+DATA
                  DATA: D+139+TASK+QUE+IN+NATA
                  DATA: P+141+TIME+DATA
            MESSAGE: ME14-NELS-TRACK+MESSAGE+MSG+OUT
               MADE BY
                  FILE: F+02+CARTO+UPDATE+FILE
                     CONTAINS
                        SATAS
                               D+029+CARTO+SECTION+HUM+DATA
                               DE030+CARTO-UPDATE-1-DATA
                        OATA:
                               D+031+CAPTO+UPDATE+2+UATA
                        DATA:
                        TATAC
                               D+032+CARTO+UPDATE+3+DATA
                               N+033+CAPTO+HPNATE+X+DATA
                        DATA:
                               D+034+CARTO+HPDATE+Y+DATA
                        DATAL
                     UMDERED WY
                        MATA: DEG29+CARTO+SECTION+NUM+DATA
               MADE HY
                               De002+ASET+MSG+DEST+DATA
                        DATA:
                               TI-004-ASET+MSG+NAMF+DATA
                        SATAS
                               DenoseASET+MSG+SOUPCE+DATA
                        DATA:
                  FATA:
                         D+135+SENSOR+ID+DATA
                  DATA: C+142+TR4CK+MESSAGF+DATA
SUBNET: SERENOENFLSEOPERATIONALECONTROLESUS
  REFERS TO
             A4134NELSEPLATFOR"+LUCATION+MSG4ALPHA
      ALPHAL
         NUTPLITS
            FILE: F+33+SFNS(P+PLATFORM+LOCATION+FILE (+)
         INPUTS
                               D+007+ASP+ACC+X+DATA
                        DATA:
                               Degoseaspeacheyenata
                        DATAL
                               DEOUGEASPEACEETEDATA
                        DATA:
                  DATA: DECLARASPEL OCEXEDATA
                        D+015+45P+LOC+Y+PATA
                  DATAS
                  DATA:
                        D+016+4SP+LUC+7+DATA
                  DATA:
                         P+021+45P+TIME+DATA
                  DATA:
                         D+022+aSP+VEL+X+DATA
                  DATA: PHORSHASPHVELHYHDATA
                         PHO24+ASP+VEL+Z+PATA
                  DATA:
         OUTPUTS
                  DATAL
                         D+002+ASET+MSG+UEST+DATA
                  CATAL
                         DEDOUGLASETEMSGENAME + DATA
                  DATAL
                         DenúseasET+MSG+SCURCF+DATA
         FURMS
            MESSAGE :
            MEO74NEL SEPLATENAMEL OCATIONEREPORTSEMSGEOUT
             (*)
      ALPHAT
             A+20+NELS+SURVETLLANCE+AND+TRACK+MSGS+ALPHA
         INPUTS
            FILE: F+25+NELS+TYPED+EMITTER+PEPORT+FILE
               COMTAINS
                              - D+070+NELS+EMITTFR+COV+DATA
                        DATAS
                        DATAL
                        U+074+NFLS+FMTTTEF+FRFQUENCY+DATA
                        DATA: D+166+FELS+EMITTER+ID+DATA
```

```
D+167+NELS+EMITTER+X+DATA
                  DATAS
                  DATAL
                         D+16A+NELS+EMITTER+Y+DATA
                         D+169+NELS+EMITTER+Z+DATA
                  DATA:
                  DATA:
                         D+170+SCENARTU+GEN+ID+NUM+DATA
                  DATA:
                  D+176+NFLS+EMITTER+RANDWINTH+DATA
                  DATA: D+177+MELS+EMITTER+CEP+DATA
                  DATAL
                  D+178+NELS+EMITTER+MODULATION+TYPF+DATA
                  DATAL
                 D+179+NELS+EMITTER+TIMF+OF+LOCATION+DATA
                  DATAS
                  D+180+NFLS+FMITTER+TRAFFIC+TYPE+DATA
  QUIPHIS
     FILE:
             F+02+CARTO+UPDATF+FILE (+)
     FILE:
             F+97+GROUP+TAKGET+LOCS+FILE (*)
  OUTPUTS
            DATA:
                   D400744SET4HSG4DEST4DATA
            DATA: PHODUHASETHMSGHNAMEHDATA
            DATA: C+005+ASET+MSG+SPUPCF+PATA
     DATA:
            r+045+CPS+ID+DATA
             D+046+GROUND+TARGET+FREQUENCY+DATA
     DATA:
     DATAS
             P+047+FFOUND+TARGET+LENGTH+DATA
             D+05C+GROUND+TARGET+VELOCITY+DATA
      DATA:
     DATA:
             D+135+SENSOR+ID+DATA
      DATA:
             METURATHACK + MESSAGE + DATA
  FORMS
      MESSAGE:
      MEDSENEL SENONESHREFTLL ANCERTARGETERFRORTSEMSGEOUT
       (*)
      MESSAGE:
      ME124NELSESPRIVEILLANCE TARGETERFPORTSENSGES OF
       (*)
      MESSAGE: METHENELSETPACKEMESSAGEERSGEGUT (*)
DUTPUT+INTESEAGE: TC+fIMINC+AND+CONTRUC+FROM+NELS
SUBNET: S+3+MONEL+NELS+GPS+PROCESSING+SUB
  PEFERS TO
      ALPHA:
             A+OH+NELS+CHARSF+LOCATION+ALPHA
         TNPUTS
            FILF:
            F+17+LELS+ESTIMATED+EVITTER+PARAMETERS+FILE
               CONTAINS
                        UATA:
                  D+077+NFLS+FMITTEP+MUMULATION+TYPF+DATA
                        DATAS
                      O-U78+NFLS+FHTTTER+POXEP+LEVEL+DATA
                        DATAS
              D+159+RFLS+FMITTER+FRFGHENCY+RANDWIDTH+DATA
                        LATAG
           De161+HELS+FMITTER+TRANSMISSTON+FREGUENCY+DATA
            FILE: F+18+NFLS+ESTIMATEN+GROUND+TRUTH+FILE
               CONTAINS
                        DATAL
                        U+068+NELS+FMITTER+CEP+PATA
                        D+157+NELS+FMTSSIDN+DUKATIQN+DATA
                        DATAL
```

```
D+158+NELS+EMISSION+START+TIME+DATA
                  DATAL
                         D+160+NELS+EMITTER+IN+DATA
                  DATAL
                         D+162+NELS+EMITTER+X+DATA
                  DATAS
                         D+163+NELS+EMITTER+Y+DATA
                  DATAS
                        D+164+NELS+EMITTER+Z+DATA
                  DATAS
                  D+165+SCENARIO+GEN+ID+NUM+DATA
     FILE: F+24+NELS+TDDA+DD+FILE
        CONTAINS
                  DATAL
                         D+05A+NELS+D9+1+2+DATA
                         D+059+4ELS+00+1+3+0ATA
                  DATA:
                  DATAS
                         D+060+NELS+DD+2+3+DATA
                  DATA:
                         P+109+NELS+TDO4+1+2+DATA
                  DATAL
                         D+110+NELS+TOUA+1+3+DATA
                  PATAS
                        D+111+NELS+TDOA+2+3+DATA
  OUTPUTS
     FILE: F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE
       (*)
ALPHA:
      A+O7+NFLS+FINE+LDCATION+ALPHA
   INPUTS
     FILE: F+13+NFLS+EMISSION+THREAT+TAPLF+FILE
         CONTAINS
                  DATA:
           D+079+ MELS+EMITTER+TIME+OF+LOCATION+DATA
                  DATA:
               949804NELS4EMITTER4TRAFFIC4TYPE4DATA
                  DATA:
                        D+171+NELS+EMITTER+ID+DATA
                  DATA:
    D+172+NELS+EMITTER+TRANSMISSION+FREGUENCY+DATA
                  DATA: D+173+NELS+EMITTER+X+DATA
                  DATA: D+174+MELS+EMITTER+Y+DATA
                  DATA: De175+NELS+EMITTFR+Z+DATA
                  DATA:
            D+181+NFLS+FMITTER+MUDULATION+TYPE+DATA
                  DATAS
                  D+182+NELS+EMITTER+RANDWIDTH+DATA
                  DATAS
                  D+183+NELS+EMITTER+CEP+DATA
         ORDERED BY
            DATAS
           DANTA-NELS-EMITTER-TIME-DE-LOCATION-DATA
     FILE:
     F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
       (*)
     FILE:
            F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE
      (*)
  OUTPUTS
     FTLE
     F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE
       (*)
            F+184NFLS+ESTIMATED+GKDUND+TRUTH+FILE
     FILES
      (*)
   INPUTS
                  D+018+ASP+PITCH+DATA
            DATA:
                  D+019+ASP+ROLL+DATA
           DATA:
            DATA: D+025+ASP+YAH+DATA
            DATA: 0+010+ASP+ALTITUPE+DATA
            DATA: D+012+ASP+LATITUDE+DATA
```

```
DATAS
                  D+017+4SP+LC4GITUDE+DATA
                  DATA: D+007+ASP+ACC+X+DATA
                  DATA: D+008+ASP+ACC+Y+DATA
                  DATA: D+009+ASP+ACC+Z+DATA
           DATA: DEGLACASPELOCEYEDATA
           DATA: D+015+ASP+LOC+Y+DATA
                  D+016+ASP+LOC+Z+DATA
           CATA:
           DATA: D+021+ASP+TIME+DATA
           DATA: D+022+ASP+VEL+X+DATA
           DATA: D+023+ASP+VEL+Y+DATA
           DATA: D+024+ASP+VEL+Z+DATA
ALPHA: A+OP+NELS+FPERUENCY+SCAN+OPTIMIZATION+ALPHA
  INPUTS
     FILF:
     F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
      (*)
   INPUTS
     DATA: C+091+NELS+FREQUENCY+SCAN+DATA
  OUTPHIS
     DATA: C+091+NELS+FREQUENCY+SCAN+DATA
ALPHA: A+17+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA
   INPUTS
     FILE:
     F+17+NELS+ESTIMATED+EMITTFH+PARAMETERS+FILE
       (*)
     FTLE:
            -F4184NELS4ESTIMATED4GROUND4TRUTH4FILE
      (*)
  OUTPUTS
     FILF: F+25+NELS+TYPED+FMITTEP+REPORT+FILE
      (*)
ALPHA: A+21+NELS+TARGET+ACRUISITION+ALPHA
  INPUTS
     FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE
         CONTAINS
            DATA:
            D+147+NELS+EMISSION+DURATION+DATA
            DATA:
           P+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA
           DATA:
            D+149+NELS+FMISSION+START+TIME+DATA
           DATA:
        U+150+NFLS+EMITTEP+FREQUENCY+BANDWIDTH+DATA
            DATA: D+151+NELS+EMITTER+ID+DATA
            DATA:
    D+152+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA
                  D+153+NELS+EMITTER+X+DATA
            DATAS
                  D+154+NELS+EMITTER+Y+DATA
            DATAS
            DATA: D+155+NELS+EMITTER+Z+DATA
            DATA: D+156+SCENARIO+GEN+ID+NUM+DATA
  CUTPUTS
     FILE
     F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
       ( * )
     FILES
            F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE
       (*)
     FILE:
            F+24+NFLS+TDOA+DD+FILE (+)
   INPUTS
            DATA: D+018+ASP+PITCH+DATA
```

```
DATA: D+019+ASP+FOLL+DATA
                         D+025+ASP+YAH+DATA
                  DATA:
                         N+010+ASP+ALTITUDE+DATA
                  DATA:
                  DATA:
                         D+012+ASP+LATITUDE+DATA
                         D+017+ASP+LONGITUDE+DATA
                  DATA:
                        DATA: D+007+ASP+ACC+X+DATA
                               D+00F+ASP+ACC+Y+DATA
                        DATA:
                        DATA: D+009+ASP+ACC+Z+DATA
                  DATA: D+014+ASP+LUC+X+DATA
                         D+015+ASP+LOC+Y+DATA
                  DATAS
                  DATA:
                         D+016+ASP+LOC+7+DATA
                         D+021+ASP+TIME+DATA
                  DATAL
                        D+022+ASP+VEL+X+DATA
                  DATAL
                  DATA: D+023+ASP+VEL+Y+DATA
                  DATA: D+024+ASP+VEL+7+DATA
      ALPHA: A+23+NELS+THREAT+TABLE+UPDATE+ALPHA
         INPUTS
           FTLF:
                  F+13+NELS+FMISSION+THREAT+TABLE+FILE
             (*)
            FILE: F+25+NELS+TYPED+FMITTER+REPORT+FILE
            (*)
         OUTPUTS
           FILE: F+13+NFLS+FMISSION+THREAT+TABLE+FILE
             (*)
      DATA: D+140+TBD+DATA
      ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET
         ASSOCIATES
            FILF: F+13+NELS+EMISSION+THREAT+TABLE+FILE
             (*)
SUBNET: SE4EMODELENELSEPLATFORMESUR
   REFERS TO
      ALPMA: A+01+DME+INS+NDISF+GENERATION+ALPHA
         INPUTS
                         D+018+ASP+PITCH+DATA
                  DATA:
                         D+019+ASP+ROLL+DATA
                  DATAS
                  DATA:
                         D+025+ASP+YAW+DATA
                         D+010+ASP+ALTITUDE+DATA
                  DATA:
                  DATA:
                        C+012+ASP+LATITUDE+DATA
                        N+017+ASP+LONGITUDE+DATA
                  DATA:
                        DATA: D+007+45P+4CC+X+DATA
                               D+00R+ASP+ACC+Y+DATA
                        UATA:
                        DATAS
                               D+009+ASP+ACC+Z+DATA
                  DATA:
                        D+014+ASP+LOC+X+DATA
                         DEDISHASPELOCEYEDATA
                  DATE:
                  DATAL
                         D+016+ASP+LCC+Z+DATA
                  DATA:
                         D+021+ASP+TIME+DATA
                         D+022+4SP+VEL+Y+DATA
                  DATAS
                  DATA:
                         D+023+ASP+VEL+Y+DATA
                  DATA:
                        D+024+ASP+VEL+Z+DATA
         DUTPLITS
                         D+018+ASP+PITCH+DATA
                  DATAS
                         C+019+ASP+FULL+DATA
                  DATA:
                         D+025+ASP+YAW+DATA
                  DATAL
                         D+010+ASP+ALTITUDE+DATA
                  DATAS
                         N+012+4SP+LATITUDE+DATA
                  DATA:
                  DATA:
                        D+017+ASP+LONGTTUDE+DATA
                        UNTA: D+007+45P+ACC+X+DATA
                        DATA: DECORFASPEACCETEDATA
```

```
DATA: D+009+4SP+ACC+7+DATA
                 DATA: D+014+ASP+LOC+Y+DATA
                        D+015+ASP+LOC+Y+DATA
                 DATA:
                        D+016+4SP+LOC+Z+DATA
                 DATAL
                        D+921+ASP+TIME+DATA
                 DATAL
                        N+022+ASP+VEL+Y+NATA
                 CATA:
                 DATA: P+023+ASP+VEL+Y+PATA
                 DATA: D+024+ASP+VEL+7+PATA
     ALPHA: A+02+RENERATE+DME+ALPHA
        INPUTS
                  F+06+FLIGHT+PROFTLF+FILE (*)
           FILE:
           FILF: F+27+PLATFORM+CONTROL+FILE (+)
        TROUTS
                 DATA: DEDUZEASFTEMSGEDESTEDATA
                 DATA: DEDOUGESETEMSGENAMEEDATA
                 DATA: DECOSEASETEMSGESCURCEEDATA
           DATA:
                 F+141+TIME+DATA
        OUTPUTS
                 DATA: C+002+ASFT+MSG+DEST+DATA
                 DATA: PERRETABLE DATA
                 DATA: D+005+ASFT+MSG+SOUPCE+DATA
                       DATA: D+007+ASP+ACC+X+DATA
                       DATA: DEGUREASPEACHEYEDATA
                       DATA: DEGOGLASPEAUCEZEDATA
                 DATA: DEGIMEASPELOCEXEDATA
                 DATA: DEGISEASPELOCEYEDATA
                 DATA: 0+016+ASP+1 UC+7+DATA
                 DATA: PENZIERSPETIMEEDATA
                 DATA: DEG22+ASP+VEL+X+DATA
                 WATA: P+023+ASP+VEI+Y+PATA
                 DATA: DEGRAHASPHVFI+7+PATA
     ALPHA: AGUSGGENERATEGINSGALPHA
        INPUTS
                 DATA: DECICEASPEALTITUCE+DATA
                 DATA: DEGIZEASPELATITUDEEUATA
                 NATA: DEPOSTE ONG THUP EPATA
                       DATA: PHOC7+ASP+ACC+X+PATA
                       DATA: THOOSHASPHACCHYHDATA
                       DATA: DEGOGEASPEACCEZEDATA
                 DATA: DEGLARASPELOCEYEDATA
                 DATA: PHOISHASPHICCHYHDATA
                 DATA: DEDIGEASPELOCETEDATA
                 1) 5 T 6 :
                        D+021+45P+TIYE+DATA
                 DATA: D+022+ASP+VEL+X+DATA
                 DATA: DE023+43P+VEL+Y+DATA
                 DATA: 0+024+ASP+VEL+7+NATA
        OUTPHES
                        P+P18+ASP+PITCH+PATA
                 DATAS
                 01T4:
                        DEDITOR SPEROIL LEDATA
                 DATES
                        DE1254ASP4YAM4DATA
                        TEGINEASPEALTITUDE+UATA
                 DATAL
                 DATAL
                        - NEC12EASPELATITUNEEDATA
                 DATA: DEGITESPEL UNGITUDE +DATA
     DATA: P+140+THP+DATA
     EMPTITY + TYPE: FI+3+NELS+FLIGHT+FT (+)
SUBMET:
       - $45440PEL45ELS4SE450F45U3
  REFERS TO
     ALPHA: A+OS+LFI S+AREA+OF+INTFREST+FIL TER+ALPHA
```

```
INPUTS
     FILE:
            F+10+NELS+CANDIDATE+TARGETS+FILE
      (*)
     FILF:
            F+20+NELS+PRE+BKIEFED+A0I+FILE
      (*)
  OUTPUTS
     FILE: F+10+NELS+CANDIDATE+TARGETS+FILE
      ( * )
  INPUTS
            DATA: D+018+ASP+PITCH+DATA
            DATA: D+019+ASP+ROLL+DATA
            DATAL
                   D+025+ASP+YAW+DATA
            DATA: D+010+ASP+ALTITUDE+DATA
            DATA: D+012+ASP+LATITUDE+DATA
            DATA: DEGITEASPELONGTTUDE COATA
                  DATA: D+007+4SP+ACC+X+DATA
                  DATA: Decograspeacceyenata
                  DATA: Decogeaspeaccezenata
            DATA: De014+ASP+LOC+Y+DATA
            DATA: D+015+ASP+LOC+Y+DATA
            DATA: 0+016+ASP+LOC+7+DATA
            DATA: D+021+ASP+TIME+DATA
            DATA: P+022+ASP+VEL+X+DATA
            DATA: D+023+ASP+VEL+Y+DATA
            DATA: DE024+ASP+VEL+7+DATA
ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
   INPUTS
      FILFI
      F414+MELS+EMITTER+ACTIVITY+GKOUND+TRUTH+FTLF
        CONTAINS
                  I A T A C
              0+063+0+NFLS+FHTSSION+START+TTME+DATA
                  DATA:
                 D+O64+NELS+EMISSTON+STOP+TTMF+DATA
                  SATA:
      C+073+R+NFLS+FMTTTER+FREQUENCY+RANDWIDTH+DATA
                  DATA:
                  D4075+B+BFLS+FMTTTER+IU+DATA
                  DATAS
   D+091+R+MELS+EMITTER+TRANSMISSTON+ERFRHEMCY+DATA
                  DATAS
                  0+082+NELS+EMITIER+VEL+X+DATA
                  DATAS
                  U+083+NELS+FMITTER+VEL+Y+DATA
                  DATAS
                  DEDRAFNELSFEMTTTERFVELFZFDATA
                  DATA:
                  D+085+R+NELS+FMTTTER+X+DATA
                  DATAL
                  Deugeesenfligermittereyenata
                  DATAS
                  DEURTERENELSEEMITTERETERATA
                  UATA:
                  DA1304R4SCENAPID4GEH4TD4NUM4DATA
         ORDERED AY
            DATA: DECTSOFIENCE SEEMITTEREINEDATA
      FILE: F+15+NFLS+FHITTER+CHANALTERISTICS+FILE
        CULTAINS
```

```
DATAS
                   D+067+NELS+EMITTER+BANDWIDTH+DATA
                   DATAS
           U+077+A+NFLS+EMITTER+MODULATION+TYPE+DATA
                   CATA:
              D+078+A+NFLS+FMITTEP+POWER+LEVEL+DATA
      FTLF:
             F+214NFLS+PRE+RRIEFED+801+FILE
       (+)
   PUTPLITS
      FILE
             F+10+NELS+CANDIDATE+TARGETS+FILE
       (*)
   INPUTS
            DATA:
                   D+018+ASP+PITCH+DATA
            DATA:
                   DED19+ASP+ROLL+DATA
            JATA:
                   D+025+45P+YAH+DATA
                   D+010+ASP+ALTITUDE+DATA
            DATA:
                   P+012+ASP+LATITUDE+DATA
            DATA:
            DATAS
                   C+017+ASP+I, ONGTTUDE+DATA
                  DATAL DEGOTEASPEACHEXEDATA
                         D+008+4SP+ACC+Y+DATA
                  UATAL
                  CATAL
                         D+009+ASP+ACC+Z+DATA
            UATA:
                  De014+ASP+LUC+X+PATA
            DATAL
                   DE015+ASP+LOC+Y+DATA
            DATA:
                   DEGLASON UCAZADATA
            DATA:
                   P+921+ASP+TIME+DATA
            DATA:
                   FIF022+ASP+VEL+X+DATA
                   FIFO23+ASP+VEL+Y+NATA
            DATAL
                   DEDZHEASPEVELEZEDATA
            DATA:
            - C+091+MELS+FREQUENCY+SCAM+DATA
      DATA:
AL PHA:
A+19+4ELS+STG* AL+TO+40TSE+OFTECTARILITY+ALPHA
   INPUTS
      FILF:
           F+10+NFLS+CANDIDATF+TADGETS+FILE
       (*)
      FILF: F+26+NELS++EATHER+FUNDITIONS+FILE
         CONTAINS
                        DATA:
                        D+037+CLOUD+COVER+UATA
                        DATA:
                        D+120+PRECIPITATION+DATA
                  UATA:
                  U+039+FLEVATION+WFATHER+DATA
            DATA: C+144+X+WEATHER+LOC+DATA
            DATA: DE146+YENEATHERELUCEDATA
  OUTPUTS
     FILE:
            F+10+NELS+CANDIDATE+TARGETS+FILE
      (*)
  INPUTS
            11116
                   DECIPEASPEPITCHENATA
                  DE019EASPEROLLEDATA
           DATAS
           DATAL
                   C+025+ASP+YAW+DATA
           DATA:
                   DE010+ASP+ALTITUDE+DATA
                   D+012+ASP+LATITUDE+DATA
           DATAL
                  F+017+ASP+LONGITHUE+DATA
           DATAL
                  DATA: P+007+4SP+4CC+X+DATA
                 DATA:
                        D+00R+ASP+ACC+Y+DATA
                 DATA: PHOOPHASPHACCHZHDATA
           DATA: D+014+ASP+LOC+Y+DATA
```

```
UATAL
                  D+015+ASP+LUC+Y+DATA
                  D+016+ASP+LQC+Z+DATA
            DATA:
                   D+021+ASP+TIME+DATA
            DATA:
                   D+022+ASP+VEL+X+DATA
            DATA:
           DATA:
                   D+023+ASP+VEL+Y+DATA
            DATA: 0+024+ASP+VEL+Z+DATA
ALPHA: A+22+NELS+TERRAIN+FOLTAGE+SHADOWING+ALPHA
  INPUTS
      FILF: F+08+HYPSO+DATA+FILE
         CONTAINS
            DATAL
                   D+051+HYPSD+FLEV+DATA
                   D+052+HYPSO+LOC+X+DATA
            DATAL
            DATA:
                  D+053+HYPSO+LOC+Y+DATA
      FILES
            F+10+NELS+CANDIDATE+TARGETS+FILE
       (*)
  OUTPUTS
     FILE:
            F+12+DETECTED+CANDIDATE+TARGETS+FILE
       (*)
  INPUTS
            DATA:
                   D+018+ASP+PITCH+DATA
                   D+019+ASP+ROLL+DATA
            DATA:
                   D+025+ASP+YAW+DATA
            DATA:
                   P+010+ASP+ALTITUDE+DATA
            DATAS
            DATA:
                   D+012+ASP+LATITUDE+DATA
            DATAS
                   P+017+ASP+LONGITUDE+DATA
                  DATA:
                         D+207+4SP+ACC+X+DATA
                  DATA:
                         D+008+ASP+ACC+Y+DATA
                  DATA:
                         D+009+ASP+ACC+Z+DATA
            DATAL
                   D+014+ASP+LOC+X+DATA
            DATA:
                   D+015+ASP+LOC+Y+DATA
            DATA:
                   D+016+ASP+LOC+Z+DATA
            DATAS
                   D+021+ASP+TIME+DATA
            DATA:
                   D+022+ASP+VEL+X+DATA
            DATA:
                   D+023+ASP+VEL+Y+DATA
            DATA:
                   D+024+ASP+VEL+Z+DATA
      D+140+TBD+DATA
DATA:
EMTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
   ASSOCIATES
     FILE:
      F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
       (*)
ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+S01+ET
 (*)
ENTITY+TYPE:
             ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
   ASSOCIATES
     FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE
      ( ± )
ENTITY+TYPE:
             ET+7+NELS+WEATHER+ET
   ASSOCIATES
     FILE: F+26+NELS+WEATHER+CONDITIONS+FILE
       (+)
ENTITY+TYPE: ET+R+NELS+PRE+BRIEFED+ANI+ET
 (*)
ENTITY+TYPE:
ET+9+SIGNAL+NCISE+CANDIDATE+TARGETS+ET
   ASSOCIATES
            F+10+NELS+CANDIDATE+TARGETS+FILE
      FILE:
       (*)
```

```
RENET: REZEMODELENFLSESENSORESYSTEMERENET
   REFERS TO
      ALPHA:
             A+04+INITIALIZE+NELS+ALPHA
         INPUTS
            FILE: F+16+NFLS+EMITTER+FILE
               CONTAINS
                        DATAS
                              C+063+A+NELS+EMISSION+START+TIME+DATA
                        DATAS
                              D+064+A+NELS+EMISSION+STOP+TIME+DATA
                        DATAS
                        D+073+A+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA
                        DATAL
                               D+075+A+NELS+EMITTER+ID+DATA
                        DATAS
                     D+081+A+MELS+EMITTER+TPANSMISSION+FREUUENCY+DATA
                        DATA:
                              D+082+4+NELS+EMITTER+VEL+X+DATA
                        DATA:
                              D+983+4+NELS+EMITTFR+VFL+Y+DATA
                        DATA:
                               D+084+A+NELS+EMITTFR+VFL+Z+DATA
                        DATAS
                              D+085+4+NELS+EMITTER+X+DATA
                        DATA:
                              S+086+4+NELS+EMITTER+Y+DATA
                        DATA: P+087+A+NELS+EMITTER+Z+DATA
                        DATA:
                              D+130+4+SCENARIO+GEN+ID+NUM+DATA
         OUTPUTS
            FILES
                   F+14+NFLS+FMITTEP+ACTIVITY+GROUND+TRUTH+FILE
             ( * )
            FILF:
                   F+15+NFLS+FMTTTER+CHARACTERISTICS+FILE (+)
         CREATES
            ENTITY+CLASS: FC+1+NFLS+DETECTABLE+EMISSION+BREAKOUT+EC
               COMPOSED OF
                  ENTITY + TYPE:
                  ET+10+GPCUND+SHADOWING+CANDIDATE+TARGETS+FT
                     ASSUCIATES
                        FILF:
                              F+10+NELS+CANDIDATE+TARGETS+FILE
                         (*)
                        FILF:
                              F+12+DFTECTED+CANDTDATF+TARGFTS+FILE
                         (*)
                  ENTITY + TYPE:
                                ET+5+NELS+PRE+BRIFFFU+SOI+ET
                   (+)
                  ENTITY+TYPE:
                                ET+R+NELS+PRE+BRIEFFD+ADI+ET
                   ( * )
                  ENTITY TYPE:
                  ET+9+SIGNAL+MCISE+CANDIDATE+TARGETS+ET (*)
               ASSOCIATES
                  DATA: Delan+TBD+DATA
            ENTITY+CLASS: FC+2+NFLS+SCENARIU+EC
               COMPOSED OF
                  ENTITY + TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
                   (*)
                  ENTITY TYPE:
                                ET+7+NELS+*EATHER+ET (*)
               ASSOCIATES
                  DATA: DETUCETEDEDATA
            ENTITY+CLASS: EC+3+NFLS+TASKS+EC
               CUMPOSED OF
                  EMTITY+TYPE: ET+3+NELS+FLIGHT+FT (+)
                  EMTITY+TYPE:
                                ET+4+NELS+FREQUENCY+SCAN+FT
                     ASSUCTATES
                        FILF: F+19+NFLS+FRFWHENCY+SCAN+FILE
                           CONTAINS
                                    DATA:
                                  Dengzenel Sefrenescanel Cherefregedata
```

```
DATAL
                           D+093+NELS+FRED+SCAN+UPPER+FRED+DATA
        ASSOCIATES
           DATA: De140+TBD+DATA
     ENTITY+CLASS: FC+4+NELS+THREAT+EC
        COMPOSED OF
            ENTITY+TYPE: ET+1+NELS+EMIRSIGN+THREAT+ET
             ( * )
        ASSOCIATES
           DATA: D+140+THD+DATA
     ENTITY+CLASS: FC+5+NFLS+VEHICLE+CHARACTERISTICS+FC
        COMPOSED OF
            ENTITY TYPE: ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
             ( * )
        ASSOCIATES
            DATA: D+140+T80+DATA
     ENTITY+CLASS: FC+6+CRTECTED+EMISSIONS+INFU+EC
         COMPOSED OF
            ENTITY+TYPE: ET+11+UETECTED+FMTSRIONR+DU+TPOA+ET
               ASSUCISTES
                  FILF:
                  F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                   (*)
                  FILE: Fe184NELS4ESTIMATED4RROUND4TRUTH4FILE
                   (*)
            ENTITY+TYPE: ET+12+DETFCTED+FMISSIONS+CUARSE+ET
               ASSUCIATES
                  FILF:
                  F4174MELS+ESTIMATED+EMITTER4PARAMETERS+FILE
                   (*)
                  FILE: F+18+NFLS+FSTIMATED+GHOUND+TQUTH+FILE
                   (*)
            ENTITY+TYPE: ET+13+DETFCTED+EMTSSIONS+FINE+ET
               ASSOCIATES
                  FILF:
                  F+17+MELS+ESTIMATFD+EMITTFR+PANAMFTFRS+FILE
                   (+)
                  FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
                   (*)
ALPHA: A+09+MELS+MAKF+SENSOR+REQUESTS+ALPHA
  OUTPUTS
            DATA:
                  - D4002+ASET+MSG+DEST+DATA
            DATAS
                  DECOULEASETHASGENAME +DATA
            DATAL
                   NEGOSEASETEMSGESOURCEEDATA
     DATAL
            D41254RED4DESTINATION+SENSOR+ID4DATA
             D+126+REQ+REPORT+INFORMATION+TYPE+DATA
     DATAL
             D+127+PED+SENSOR+TARGET+ID+OF+THTEPEST+DATA
     DATA:
     DATAS
            De135+SENSOR+ID+DATA
  FORMS
      MESSAGE: M+10+YELS+SENSOR+REDUESTS+MSG+GHT (*)
ALPHA: A+10+NELS+MOUTFY+CRRIT+ALPHA
   INPUTS
     FILE: F+06+FLIGHT+PHOFILF+FILE (*)
     FILE: F+32+SFNSOP+CRRIT+MUDS+FILE
         CONTAINS
            TATAS
                  DE1174FLATEUPMEMODEXEDATA
            DATAL
                  DETIREPLATFURMEMOUFYEDATA
            DATAL
                   DE1194FLATFQRMEHNDEZEDATA
```

```
NUTPUTS
     FILE: F+06+FLIGHT+PROFILE+FILE (*)
   INPUTS
     DATA: D+135+SENSOR+ID+DATA
ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
  INPUTS
     FILE: F+05+FFASIBLE+ACTIVITY+AREA+FILE
        CONTAINS
                  N+143+X+LOC+FEASIBLE+DATA
           DATAS
            DATA: D+145+Y+LOC+FEASTBLE+D4TA
     FILE: F+00+FLIGHT+PROFILE+FILE (+)
  CUTPUTS
            F+064FI IGHT+PAOFILE+FILE (*)
     FILE
   INPUTS
            D+056+MEFOFD+FEASIBLE+DATA
     DATAS
     SATAS
            D+159+TASK+QUE+ID+DATA
     DATAL DE141+TIME+DATA
  CUTPUTS
           DATA: D+002+ASFT+MSG+DEST+DATA
                  DE004+ASET+MSG+NAME+DATA
           DATAS
            DATA: D+005+4SET+MSG+SOURCE+DATA
     DATA: D+138+TASKING+RESPONSE+DATA
     DATA:
            P+1394TASK+ULE+IP+DATA
     DATA: D+141+TIME+DATA
   FURMS
      MESSAGE: M+13+MELS+TASKING+RESPONSES+MSG+ONT (*)
ALPHA: 4-14-NELS-PROCESS-COMMANDERS-PEQUIREMENTS-ALPHA
   INPUTS
      FILE: F+04+CMURS+)ATA+TO+UPDATE+FILE
         CONTAINS
                  - NEDGOEFIRSTECMPRSEREGEUPOATEEDATA
            DATA:
            DATA: DE1336SECONDECMURSEREGEUPDATEEDATA
      FILE: F+20+NFLS+PRE+BRIEFED+ADI+FILE (+)
      FILE: F+21+4FLS+PRF+8RIFFEP+901+FILE (*)
   OUTPUTS
            F+20+NFLS+PRF+HRIEFED+ADI+FILE (+)
      FILE:
      FILE: F+21+NFLS+PRF+BRIEFEP+SUI+FILE (+)
ALPHA: A+15+MELS+PROCESS+PRIBRITIZED+SENSUR+DIRECTIONS+ALPHA
   INPUTS
            F+C5+FFASIBLE+ACTIVITY+AREA+FILE (+)
      FILF:
      FILE: F+19+NFL3+FRFRHENCY+SCAN+FTLF (+)
   OUTPUTS
            F+19+NFLS+FREUNENCY+3CAN+FILE (*)
      FILE:
   INPUTS
            - D+056+NEFUFD+FEASIPLF+DATA
      DATAS
      DATA:
            D+135+SEMSOR+ID+DATA
      DATA: D+137+SEMSUR+PRIORITY+DATA
ALPHA: A+16+NELS+PROCESS+REQUESTED+DATA+ALPHA
   THPUTS
      FILE: F+OA+FI IGHT+PROFILE+FILE (+)
      FILE: F+07+GROUP+TARGET+LOCS+FILE (*)
   NUTPUTS
      FILE: F+Oo+FLIGHT+PHOFILE+FILE (+)
   TNPUTS
      DATA: De045+GP5+TD+DATA
ALPHA: A+24+PESET+HELS+ALPHA
   DESTROYS
      ENTITY+CLASS: FC+2+NFLS+SCFNARTO+EC (*)
```

```
ENTITY+CLASS:
                    EC+3+NELS+TASKS+EC (*)
      ENTITY+CLASS:
                    EC+4+NELS+THREAT+EC (*)
      ENTITY+CLASS:
                    EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
       (\pm)
      ENTITY+CLASS: EC+6+DETECTED+EMISSIONS+INFO+EC (*)
ALPHA:
       A+25+UPDATE+CARTO+ALPHA
   INPUTS
      FILE: F+01+BRIDGE+LOCATIONS+FILE
         CONTAINS
                  D+026+PRIDGE+LOC+X+DATA
            DATAS
            DATA: D+027+PRIDGE+LOC+Y+DATA
      FILE:
            F+02+CARTO+UPDATE+FILE (*)
      FILE: F+03+CTTY+LOCATIONS+FILE
         CONTAINS
            DATA: D+035+CITY+LOC+X+DATA
            DATA: D+036+CITY+LOC+Y+DATA
      FILE: F+08+HYPSO+DATA+FILE (+)
      FILE: F+09+MARSHALLING+APEAS+FILE
         CONTAINS
            DATA: DE054+MARSHALLING+X+DATA
            DATA: D+055+MARSHALLING+Y+DATA
      FILE: F+28+PPIMAPY+ROADS+FILE
         CONTAINS
            DATA: P+121+PHIMARY+POADS+X+DATA
            DATA: De122+PRIMARY+POADS+Y+DATA
      FILE: F+29+RAILROAD+LOCATIONS+FILE
         CONTAINS
            DATA:
                  D+123+RAILPOAD+LOC+X+DATA
            DATAL
                  P+124+PATLROAD+LOC+Y+DATA
      FILE: F+30+RIVER+LCCATIONS+FILE
         CONTAINS
            DATA:
                   D+128+RIVER+LOC+Y+DATA
            DATA: P+129+FIVER+LUC+Y+DATA
      FILE: F+31+SFCONDARY+ROADS+FILE
         COMTAINS
            DATAS
                   D+131+SECOMDARY+ROAD+X+DATA
            DATA:
                  D+132+SECONDARY+POAD+Y+DATA
   OUTPUTS
      FILES
            F+01+BRIDGE+LOCATIONS+FILE (*)
      FILE:
            F+03+CTTY+LOCATIONS+FILE (*)
      FILE
             F+08+HYPSO+DATA+FILE (*)
      FILE
             F+09+MARSHALLING+AREAS+FILE (+)
      FILE:
             F+28+P@IPARY+POADS+FILE (*)
      FILES
             F+29+RAILROAD+LOCATIONS+FILE (*)
             F+30+RTVFR+LOCATIONS+FILE (+)
      FILE:
      FILE: F+31+SFCONDAPY+ROADS+FILE (*)
   INPUTS
      DATA: D+028+CARTO+MAP+SECT+NUM+DATA
   OUTPUTS
     DATA: D+028+CARTO+MAP+SECT+NUM+DATA
DATA: D+004+4SFT+MSG+NAME+DATA
DATA: D+149+T8D+DATA
ENTITY+TYPE: ET+3+NELS+FLIGHT+ET (+)
ENTITY TYPE: ET+4+NELS+FREQUENCY+SCAN+ET (*)
ENTITY+TYPE: ET+5+NELS+PPE+8PIFFFD+SOI+ET (*)
ENTITY TYPE: ET+8+NELS+PPE+BPIEFED+ADI+ET (*)
INPUT+INTERFACE: INTO+MELS+SENSOR
   PASSES
```

```
MESSAGE: M+01+ES+NFLS+UNTT+AND+ENVTPONMENT+DATA+MSG+IN
   MADE BY
     FILF:
            F+16+NELS+FMITTER+FILE (+)
   MAPE BY
            DATA:
                  -D+002+/SET+MSG+DFST+DATA
            DATAL
                  T+004+4SET+MSG+NAME+DATA
            DATAS
                  T+105+4SET+MSG+SDURCE+DATA
MESSAGE: M+02+MELS+CARTO+UPDATES+MSG+IN
   MADE BY
     FILE:
           F+02+CARTC+UPDATE+FILE (*)
   MADE BY
            DATAL
                  C+002+ASET+MSG+DEST+DATA
            DATA: DEDOMEASETEMSGENAMEEDATA
            DATA: 0+005+ASET+MSG+SOURCE+DATA
MESSAGE:
         M+OZ+NELS+COMMANDFRS+REQUIREMENTS+MSG+IN
   MADE BY
            F+04+CYDRS+DATA+TO+UPDATE+FILE (*)
      FILE:
   MADE BY
            DATA: D+002+4SET+MSG+DEST+DATA
            DATA: C+004+ASET+MSG+NAME+DATA
            DATA: D+005+ASET+MSG+SOURCE+DATA
MESSAGE: M+04+NELS+MODIFIED+TASK+MSG+IN
   MADE BY
            F+05+FEASIBLE+ACTIVITY+AREA+FILE (+)
      FILE:
   MAPE BY
                  D+002+ASFT+MSG+DEST+DATA
            DATA:
            DATA:
                   D+004+4SET+MSG+NAME+DATA
            DATA: D+005+ASET+MSG+SOURCE+DATA
      DATA: P+056+NEEDED+FEASIBLE+DATA
      DATA: D+139+TASK+QUE+ID+DATA
MESSAGE: M+06+NELS+OPBIT+MODIFICATIONS+MSG+IN
   MADE BY
      FILE: F+32+SFNSOP+ORBIT+MODS+FILF (*)
   MADE BY
                  - D+002+ASET+MSG+DEST+DATA
            UATA:
                  C+004+ASET+HSG+NAMF+DATA
            DATA:
            DATA: D+005+ASET+MSG+SOURCE+DATA
      DATA: D+135+SENSOR+ID+DATA
         M+OR+VELS+PRIGRITIZED+SENSOR+DIRECTIONS+MSG+IN
MESSAGE:
   MADE BY
      FILE:
             F+05+FEASIRLF+ACTIVITY+AREA+FILE (+)
   MADE BY
            DATA:
                   D+002+ASET+MSG+DEST+DATA
                   DEDOMEASETEMSGENAMEEDATA
            DATA:
            DATA: D+005+ASET+MSG+SCURCE+DATA
      DATA:
            D+056+NEFDED+FEASIBLE+DATA
      DATA: D+135+SENSOR+ID+DATA
      DATA: D+137+SENSOR+PRIORITY+DATA
MESSAGE: M+09+NELS+REGUESTED+SENSUR+7ATA+MSG+IN
   MADE BY
            F+07+GROUP+TARGET+LOCS+FILE (*)
      FILE:
   MADE BY
            DATA: C+002+4SET+MSG+DEST+DATA
                  C+004+ASET+MSG+NAME+DATA
            DATA:
            UATA:
                   - 1+005+4SET+MSG+SOUPCE+DATA
      DATA: D+045+GPS+ID+DATA
MESSACE:
         - M+1R+T+AND+C+STOP+NELS+MSG+TN
   MADE BY
```

DATA: P+002+ASET+MSG+DEST+DATA
DATA: P+004+ASET+MSG+NAME+DATA
DATA: P+005+ASET+MSG+SDURCE+DATA

OUTPUT+INTERFACE: TU+TIMING+AND+CONTROL+FROM+NELS (*)
SUBNET: S+1+FHECK+NELS+SENSCR+STATUS+SUB (*)

*ERPOR 2460 REPETITIVE DATA SETS(RDS) CUNTAIN COMMON MEMBERS

RDS1= FNTITY+CLASS: EC+1+NELS+DETECTARLF+EMISSION+BREAKOUT+EC

PDS2= ENTITY+CLASS: EC+2+MELS+SCENAPIC+FC

COMMON MEMPERSE

PATA: D+140+TBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CUNTAIN COMMON MEMBERS

RDS1= ENTITY+CLASS: EC+1+NELS+DETECTAPLE+EMISSION+BREAKOUT+EC

RDS2= FNTITY+CLASS: EC+3+NELS+TASKS+EC

COMMON MEMBERS=

DATA: D+140+TBD+DATA

#EPPOR 2460 PEPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

RDS1= FNTITY+CLASS: EC+1+MELS+DETECTABLE+EMISSION+BREAKOUT+EC

PDS2= ENTITY+CLASS: EC+4+MELS+THREAT+EC

COMMON MEMBERS=

DATA: D+140+TPD+DATA

#ERROR 2460 PEPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

PDS1= ENTITY+CLASS: EC+1+"ELS+DETECTABLE+EMISSION+BREAKOUT+EC

PDS2= ENTITY+CLASS: EC+5+MELS+VEHICLE+CHARACTERISTICS+EC

COMMON MEMBERS=

PATA: 0+140+TBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

PDS1= FNTITY+CLASS: EC+>+NELS+SCENARIO+EC

RDS2= ENTITY+CLASS: EC+3+NELS+TASKS+EC

COMMON MEMBERS=

DATA: D+140+TBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS RDS1= ENTITY+CLASS: EC+2+MELS+SCENAPIO+EC PDS2= ENTITY+CLASS: EC+4+MELS+THREAT+EC COMMON MEMBERS=

DATA: 0+140+TBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

RDS1= FNTITY+CLASS: EC+2+MELS+SCENAPIO+EC

RDS2= FNTITY+CLASS: EC+5+MELS+VEHICLE+CHARACTFRISTICS+EC

COMMON MEMBERS=

DATA: D+140+TPD+DATA

#ERROR 2460 REPETITIVE DATA GETS(ROS) CONTAIN COMMON MEMBERS

RDS1= FNTITY+CLASS: EC+3+NELS+TASKS+EC

RDS2= ENTITY+CLASS: EC+4+NELS+THREAT+EC

COMMON MEMBERS=

DATA: D+140+TBD+DATA

#ERROR 2060 PEPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS
RDS1= FNTITY+CLASS: EC+3+MELS+TASKS+EC
PDS2= FNTITY+CLASS: EC+5+MELS+VEHICLE+CHARACTERISTICS+EC
COMMON MEMBERS=
PATA: D+140+TBD+DATA

*ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

```
ROSIE ENTITY+CLASS: EC+4+NELS+THREAT+EC
   RDS2= FNTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
    COMMON MEMBERS=
          DATA: D+140+TBD+DATA
TRADX COMMAND=
ANALYZE DATA+FLOW A HSING RETA.
  RENET: REJEHANDLE-MELS-SENSOR-AND-GPS-PROCESSING-RENET
      REFERS TO
         SUBNET: S+1+CHECK+MELS+SENSOR+STATUS+SUB
            REFERS TO
               ALPHA: A+17+HELS+SFNSOR+STATUS+ALPHA
                  INPUTS
                     FILE: F+06+FLIGHT+PROFILF+FILE
                        CONTAINS
                           DATA:
                                  DED41+FLIGHT+WAYPOINT+Y+DATA
                           DATAL
                                  P+042+FLIGHT+WAYPDINT+Y+PATA
                           DATA: CHO434FLIGHTHWAYPUINTHZHOATA
                     FILE: F+20+NELS+PRE+AHIEFED+AUT+FILE
                        CONTAINS
                                 DATA:
                      D+095+VELS+P4E+BPIEFED+A0I+F1LTERING+CRITERIA+DATA
                            DE0974NELSEPREEBPIFFEDEADIELOWERELEFTEXEDATA
                                       DATA:
                            DANGRANELSAPPEABRIEFEDAADIALOWFRALEFTAVADATA
                                       UATA:
                           D+100+NFLS+PRF+RRTEFED+4UI+NPPEP+RIGHT+X+PATA
                           D+101+NFLS+PRE+BRIEFED+ADI+UPPER+PIGHT+Y+DATA
                     FILE: F+21+NELS+PRE+PHIEFED+SOI+FILE
                        CONTAINS
                                 SATAL
                                C+103+NELS+PRE+HRIFFFD+SDI+END+FRED+DATA
                                 I) A T A &
                                 0+104+NFLS+PRE+RRIEFED+SOI+FREQ+DATA
                                 DATAL
                         D+105+NFLS+PRE+PRIEFED+SDI+MODULATION+TYPF+DATA
                                 DATAL
                              0+106+NELS+PRE+HRIEFED+SOI+START+FREO+DATA
                  OUTPUTS
                     FILE: F+34+SFNSUR+STATUS+FILE
                        CONTAINS
                           DATA:
                                  T+GUU+FREGUENCY+SCAN+PARAMETER+DATA
                           DATA:
                                  C+135+SENSOR+MODE+OF+OPERATION+DATA
                  INPUTS
                                 D+002+ASET+MSG+DEST+DATA
                           DATAS
                           DATA:
                                 PARONASETAMSGANAMEADATA
                           DATAS
                                  THOOSEASETEMSGESOURCEEDATA
                                 DATA: DEGOTEASPEACCEXEDATA
                                 DATA: DEGOREASPEACCEYEDATA
                                 DATA: DEROSEASPEACCEZEDATA
                           DATA: PHOTISHASPHLUCHYHDATA
```

DATA: D+015+45P+LOC+Y+DATA

```
DATAL
                   D+016+ASP+LOC+Z+DATA
            DATAL
                  C+021+ASP+TIME+DATA
            DATAL
                  D+022+ASP+VEL+X+DATA
            DATA:
                  D+023+ASP+VEL+Y+DATA
           DATA: P+024+ASP+VEL+Z+PATA
     DATA: D+091+NELS+FREQUENCY+SCAN+DATA
     DATAL
            D+135+SENSOR+ID+DATA
  DUTPUTS
                  D+002+4SET+MSG+DEST+DATA
           DATA:
                  - D+004+ASET+MSG+NAME+DATA
            DATAL
           DATA: D+005+ASET+MSG+SOURCE+DATA
     DATA: DEGGIANTELSEFREGUENCYESCAMEDATA
     DATA: D+135+SENSOR+IC+DATA
  FORMS
      MESSAGE: M+11+NELS+SENSUR+SYSTEM+STATUS+MSG+NUT
         MADE BY
           FILE:
                  F+34+SENSOR+STATUS+FILE (*)
         MADE BY
                  DATAL D+902+ASET+MSG+DEST+DATA
                  DATA:
                        D+004+ASET+MSG+NAME+DATA
                  DATA:
                        D+005+ASET+MSG+SOURCE+DATA
           DATA: D+135+SENSOR+ID+DATA
      D+136+SENSOR+MODF+OF+OPERATION+DATA
BATAL
DATAL D+140+TBD+DATA
ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
   ASSOCIATES
      FILE: F+06+FI.IGHT+PROFILE+FILE (*)
      FILE: F+27+PLATFORM+CONTPUL+FILE
         CONTAINS
                  DATA: D+010+ASP+ALTITUDE+DATA
                  DATA: D+012+ASP+LATITUDE+DATA
                        P+017+ASP+LONGTTUDE+DATA
                  JATA:
                  THOISHASPHLOCHX+DATA
            DATA:
            UATAS
                  C+015+ASP+LUC+Y+PATA
                  D+016+ASP+LUC+Z+DATA
            DATA:
                  P+022+ASP+VEL+X+PATA
            DATA:
            DATA:
                  C+023+ASP+VEL+Y+DATA
           DATA: F+024+ASP+VEL+Z+DATA
ENTITY+TYPE:
             ET+5+NELS+PRE+BRIEFFD+SMI+ET
   ASSOCIATES
     FILE: F+10+NELS+CANDIDATE+TARGETS+FILE
         CONTAINS
            SATA:
                  D+061+NELS+EMISSTON+DURATION+DATA
            DATA:
            D+042+NELS+EMISSION+SIGNAL+STPENGTH+DATA
           DATA: C+063+NELS+EMISSION+START+TIME+DATA
           DATAL
            0+073+NELS+EMITTEP+FREWUENCY+RANDWIDTH+DATA
            DATA: D+075+NELS+EMITTER+ID4: TA
                  DATA: PHONS+NELS+EMITTER+X+UATA
                  DATA: DEOBSENELSEEMITTEREYEDATA
                  DATA: DED87+NELS+EMITTFP+Z+DATA
           DATA:
           D+081+NELS+EMITTER+TRANSMISSION+FREUDENCY+DATA
            DATA: C+130+SCENARIO+GFN+ID+NUM+DATA
     FILE: F+21+NFLS+PRE+BRIEFED+SOI+FILE (+)
ENTITY+TYPE: ET+R+NELS+PRE+URIEFED+ANI+ET
   ASSOCIATES
```

```
FILE: F+10+NELS+CANDIDATE+TARGETS+FILE (+)
      FILE: F+20+NELS+PRE+BRIEFED+A0I+FILE (*)
EVENT:
        E+1+ACTIVATE+SENSOR+EVENT
OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS
   PASSES
      MESSAGE:
      M+05+NELS+NON+SURVEILLANCE+TAPGET+REPORTS+MSG+OUT
         MADE BY
            FILF: F+07+GROUP+TARGET+LOCS+FTLE
               CONTAINS
                  DATA: DEGUAREGROUNDETARGETELOCEXENATA
                  DATA: D+049+GROUND+TARGET+LUC+Y+DATA
         MADE BY
                  DATA: D+002+ASET+MSG+DFST+DATA
                  DATAL DEGULARETEMSGENAMFEDATA
                  DATA: D+005+ASET+MSG+SOURCE+DATA
            DATAS
                  D+045+GPS+TU+DATA
            DATAL
                  C+046+GROUND+TARGET+FREQUENCY+DATA
            DATAS
                  Den47+GROUNDETARGET+LENGTH+DATA
            CATA:
                  C+050+GROUND+TARGET+VELOCITY+DATA
     MESSAGE :
     M4074MELS+PLATERP4+LOCATION+REPARTS+M9G+DDT
         MADE BY
            FILE: F+33+SFNSOR+PLATFORM+LOCATION+FILE
               CUNTAINS
                  DATA:
                        P+114+PLATFORM+LOCATION+X+DATA
                  DATAL
                        DelisePlatrogmelocation eyenata
                  DATA: 0+116+PLATEOPM+LOCATION+Z+DATA
         MADE BY
                        D+002+ASET+MSG+DFST+DATA
                  TATAG
                         D+004+4SET+MSG+NAME+DATA
                  DATA:
                  DATA:
                         DEDOSEASETEMSGESPURCEEPLATA
     MFSSAGE:
               METOENELSESENSUREREQUESTSEMSGEDHT
         MADE BY
                  DATA: D+002+ASET+MSG+DFST+DATA
                  DATA: P+004+ASET+MSG+NAME+DATA
                  DATA: D+005+ASET+MSG+SPURCE+DATA
            DATA:
                  De125+PER+DESTINATION+SENSOR+ID+DATA
            DATA: De126+REDEREPORT-INFORMATION-TYPE-DATA
            DATA:
            D+127+REW+SENSUR+TARGET+ID+DF+INTEREST+DATA
            DATA: D+135+SENSOR+ID+DATA
     MESSAGE: M+11+NELS+SENSUR+SYSTEM+STATUS+MSG+DUT
      (*)
     MESSAGE:
     M+12+NELS+SURVEILLANCE+TARGET+RFPORTS+MSG+OUT
         MADE BY
            FILE: F+07+GPOUP+TARGET+LOCS+FILE (*)
         HAPE BY
                  DATA: DEGOZEASETEMSGEDESTEDATA
                       C+004+ASET+MSG+NAME+DATA
                  DATAL
                  DATA: D+005+ASET+MSG+SOURCE+DATA
            DATAL
                  C+045+GPS+ID+DATA
           DATA:
                  DEGUAREGROUNDETARGETEFREGUENCYEDATA
           DATAL
                  D+047+GROUND+TARGET+LENGTH+DATA
                  C+C50+GROUND+TARGET+VELOCITY+DATA
     MESSAGE: M413+NELS+TASKING+RFSPONSFS+MSG+OUT
         MADE BY
```

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```

```
D+002+ASFT+MSG+DEST+DATA
                        DATAS
                        DATAL
                              D+PO4+ASET+MSG+NAME+DATA
                              D+005+ASET+MSG+SOURCE+DATA
                        DATAS
                  DATA: C+13A+TASKING+RESPONSE+DATA
                  DATA: D+139+TASK+QUE+ID+DATA
                  DATAS C+141+TIME+DATA
           MESSAGE: M+14+NELS+TRACK+MESSAGE+MSG+OUT
               MADE BY
                  FILE: F+02+CARTO+UPDATE+FILE
                     CONTAINS
                       DATAS
                              D+029+CARTO+SECTION+NUM+DATA
                        DATAS
                               D+030+CARTO+UPDATE+1+DATA
                               D+031+CARTO+UPDATE+2+DATA
                        DATAL
                              D+032+CARTO+UPDATE+3+DATA
                        DATAS
                               D+033+CARTD+UPDATE+X+DATA
                        PATAG
                        DATA: D+034+CARTO+UPDATE+Y+DATA
                     ORCERED BY
                        DATA: D+029+CARTO+SECTION+NUM+DATA
               MADE BY
                        DATA: D+002+ASET+MSG+DEST+DATA
                        DATA:
                              D+004+ASET+MSG+NAME+DATA
                        DATA:
                              D+005+ASET+MSG+SOURCE+DATA
                  DATA:
                        C+135+SENSOR+ID+DATA
                  DATAS
                        D+142+TRACK+MESSAGE+DATA
SUBNET: S+2+DO+NELS+CPERATIONAL+CONTROL+SUR
   REFERS 10
             A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA
      ALPHA:
         OUTPUTS
            FILE: F+33+SENSOR+PLATFORM+LOCATION+FILE (*)
         INPUTS
                        DATA: D+007+ASP+ACC+X+DATA
                              D+008+ASP+ACC+Y+DATA
                        DATA:
                        DATA: D+009+ASP+ACC+Z+DATA
                  DATA:
                        D+014+ASP+LOC+X+DATA
                  DATAS
                         D+015+ASP+LOC+Y+DATA
                        C+016+ASP+LOC+7+DATA
                  DATA:
                  DATA:
                         D+021+ASP+TIME+DATA
                  DATAS
                         C+022+ASP+VEL+X+CATA
                  DATAS
                        D+023+ASP+VEL+Y+DATA
                  DATA: D+024+ASP+VEL+Z+DATA
         DUTPUTS
                  DATA: D+002+ASET+MSG+DEST+DATA
                  DATA:
                         D+004+ASET+MSG+NAME+DATA
                  DATA: 0+005+ASET+MSG+SPURCE+DATA
         FORMS
            MESSAGE:
            M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT
             (\pm)
      ALPHA:
             A+20+NELS+SURVEILLANCE+AND+TRACK+MSRS+ALPHA
         INPUTS
            FILE: F+25+NFLS+TYPED+EMITTER+REPORT+FILE
               CONTAINS
                        DATAL
                              D+070+NELS+EMITTER+COV+DATA
                        DATAS
                        D+074+NFLS+EMITTER+FREQUENCY+DATA
                        DATA: D+166+NELS+EMITTEH+ID+DATA
                               D+167+NELS+EMITTER+X+DATA
                        DATAL
                              D+168+NELS+EMITTER+Y+DATA
                        DATAL
                         C - 25
```

```
D+169+NELS+EMITTER+Z+DATA
                  DATA:
                  .) 4 T A 1
                         D+170+SCENARIO+GEN+ID+NUM+PATA
                  DATAS
                  D+176+NELS+EMITTER+RANDWIDTH+DATA
                  DATA: D+177+NELS+EMITTFR+CFP+DATA
                  DATAS
                  D+178+HELS+FMITTER+MODULATION+TYPE+DATA
                  DATAS
                 D+179+NELS+EMITTFR+TIME+OF+LOCATION+DATA
                  DATAS
                  D+180+NFLS+EMITTER+TRAFFIC+TYPE+DATA
   OUTPUTS
            F+02+CARTO+UPDATF+FILE (*)
      FILE:
      FILE:
            F+07+GROUP+TARGET+LUCS+FILE (*)
   OUTPUTS
            : ATAG
                  D+002+ASET+MSG+DEST+DATA
            DATA:
                  D+004+ASET+MSG+NAME+DATA
            : ATAC
                   P+005+ASET+MSG+SHURCE+PATA
      DATA:
            1+045+GPS+T0+DATA
      DATA:
            DECAKEGROUNDETARGETERREQUENCYEDATA
      DATAL
            N+047+GROUND+TARGET+LENGTH+DATA
      DATA:
             D+050+GROUND+TARGET+VELOCITY+DATA
      DATA:
             D+135+SENSOR+ID+DATA
      DATA:
            - D+142+TRACK+MESSAGE+DATA
   FORMS
      MESSAGE:
      M+05+NELS+NON+SURVEILLANCF+TARGET+REPORTS+MSG+OUT
       ( * )
      MESSAGE:
      M+12+NELS+SURVEILLANCE+TARGET+RFPORTS+MSG+OUT
       (*)
      MFSSAGE: M+14+NELS+TRACK+MESSAGE+MSG+OUT (+)
OUTPUT+INTERFACF: TU+TIMING+AND+CONTPOL+FROM+NELS
 (+)
SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR
   REFERS TO
      ALPHA:
             A+U6+1ELS+COARSE+LUCATION+ALPHA
         INPUTS
            FILE:
            F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
               CONTAINS
                        DATA:
                  U+C77+NELS+EMITTER+MODULATION+TYPE+DATA
                        DATAS
                      D+078+NFLS+EMITTER+PUHER+LEVEL+DATA
                        DATA:
              D+159+NELS+FMITTER+FREQUENCY+RANDWIDTH+DATA
                        DATAL
           T+161+FELS+EMITTER+TPANSMISSION+FREQUENCY+DATA
            FILE: F+18+NFLS+FSTIMATED+GROUND+TRUTH+FILE
               CONTAINS
                        DATA:
                        D+068+NELS+FMITTER+CEP+DATA
                        DATAS
                        D+157+NELS+EMISSION+DURATION+DATA
                        DATA:
                      U+158+NELS+EMISSION+START+TIME+DATA
                        DATA: P+160+NELS+EMITTER+ID+DATA
```

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DATAS
                         D+162+MELS+EMITTER+X+DATA
                         D+163+NELS+EMITTER+Y+DATA
                  DATAS
                  DATA:
                         D+164+NELS+EMITTER+Z+DATA
                  DATA:
                  D+165+SCENARIO+GEN+ID+NUM+DATA
     FILE: F+24+NFLS+TDOA+DD+FILE
        CONTAINS
                         D+058+NELS+DD+1+2+DATA
                  DATAL
                         D+059+NELS+DD+1+3+DATA
                  DATA:
                  DATA:
                         D+060+NELS+DD+2+3+DATA
                         P+109+MELS+TOU4+1+2+DATA
                  DATA:
                         D+110+MELS+TDUA+1+3+DATA
                  DATA:
                         D+111+NELS+TDUA+2+3+DATA
                  UATA:
  OUTPUTS
     FILE: F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE
      (*)
       A+07+MELS+FINE+LOCATION+ALPHA
ALPHA:
   INPUTS
      FILE: FOISONFLSOFMISSIONOTHREATOTABLEOFILE
         CUNTAINS
                  DATA:
           D+079+MELS+EMITTER+TIMF+OF+LOCATION+DATA
                  DATAL
               DANBOANELSAEMITTERATRAFFICATYPEADATA
                        D+171+MELS+EMITTER+ID+DATA
                  DATAS
                  DATA:
     D+172+HELS4EMITTER+TRANSMISSTUN+FREUUEMCY+DATA
                  DATA: DE173+MELS+EMITTER+X+DATA
                         De174+MELS+EMITTER+Y+DATA
                  DATAS
                         D+175+ YELS+EMITTER+Z+DATA
                  UATA:
                  LATA:
            D+1R1+NFLS+EMITTER+MODULATION+TYPE+DATA
                  DATAL
                  D+182+NELS+FMITTER+RAMDWIDTH+DATA
                  DATAL
                  U+183+NFLS+FMTTTER+CEP+DATA
         ORDERED BY
            DATA:
           D+079+NELS+EMITTER+TTMF+DF+LACATION+DATA
      FILF:
      F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
       (4)
             F#18#NFLS#ESTIMATED#GROUND#TRUTH#FTLE
      FILE:
       (*)
   OUTPUTS
      FTLE:
      F+17+ ELS+ESTIMATED+EMITTFR+PARAMETERS+FILE
       (*)
             F418+NFLS+FSTIMATED+GROUND+TRUTH+FILE
      FTLF:
       (*)
   INPUTS
                   De018+4SP+PITCH+DATA
            DATA:
                   De019+ASP+ROLL+DATA
            OATAL
                   D+025+ASP+YAH+DATA
            DATAS
            DATAS
                    P+010+ASP+ALTITUPE+DATA
                   D+012+ASP+LATITUDE+DATA
            DATA:
                   D+017+ASP+LG4GTTUDF+DATA
            GATAL
                   DATA: D+007+ASP+ACC+X+DATA
```

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DATA: Decomessee Decomes DATA:
                  DATAL DEGOGEASPEACCEZEDATA
            DATA:
                  D+014+ASP+LOC+X+DATA
            DATA:
                   D+015+ASP+LOC+Y+DATA
            DATAL
                   D+016+ASP+LOC+7+DATA
            TATAC
                   D+021+ASP+TIME+DATA
            DATAS
                   D+022+ASP+VEL+X+DATA
                   D+023+4SP+VEL+Y+DATA
            DATA:
            DATA:
                   D+024+ASP+VEL+7+DATA
ALPHA: A+OP+NELS+FREQUENCY+SCAN+OPTIMIZATION+ALPHA
   INPUTS
      FILE:
      F+17+NELS+ESTIMATED+EMITTFR+PARAHFTFRS+FILE
      (*)
   INPUTS
      DATA: DE091+MELS+FREQUENCY+SCAN+DATA
   OUTPUTS
      DATA: DE091+NELS+FREQUENCY+SCAN+DATA
ALPHA:
       A+12+NFLS+PERFORM+SIGNATURE+ANALYSIS+ALPHA
   INPUTS
      FILF:
      F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE
      (*)
      FILE: F+18+NELS+ESTIMATED+GROUND+TPUTH+FILE
      (*)
   OUTPHIS
      FILE: F+25+NFLS+TYPEN+EMTITER+REPORT+FILE
       (*)
ALPHA:
       A+21+NELS+TARGET+ACQUISTTIUN+ALPHA
   INPUTS
      FTLF: F+12+DFTECTED+CAMBTDATE+TAMGETS+FILE
        COMTAINS
            DATAS
            D+147+NFLS+EMISSION+D'IRATION+DATA
            DATA:
           D+1494MELS+EMISSION+SIGNAL+STRENGTH+DATA
            CATA:
           U+149+NFLS+FMISSION+START+TIME+DATA
           DATAS
       D+150+NFLS+EMITTER+FREQJENCY+RANDWIDTH+DATA
           DATA: D+151+NELS+EMITTER+ID+DATA
           DATAL
    8+152+NELS+EMITTER+TRANSMISSION+FREWMENCY+DATA
           DATA: DE153+HELS+EMITTER+X+DATA
           UATA:
                  D+154+NELS+EMITTFR+Y+DATA
           DATA: D+155+NELS+EMITTER+Z+DATA
           DATA: D+156+SCENARIQ+GEN+ID+NUM+DATA
  DUTPHIS
     FILF:
     F+17+ EL S+ESTIMATED+EMITTER+PARAMETERS+FILE
      (*)
     FILE:
            F+18+NFLS+FSTIMATED+GROUND+TRUTH+FTLF
      (*)
     FILF:
            F+24+NELS+TDOA+DO+FILE (+)
  INPUTS
           DATA: P+01R+ASP+PITCH+DATA
           DATA: DEGIZEASPEROLLEDATA
           DATAS PHO25+ASP+YA 4+DATA
           C - 28
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```
DATA: D+010+ASP+ALTITUDE+DATA
                  DATA:
                         D+012+ASP+LATITUDE+DATA
                         D+017+ASP+LONGITUDE+DATA
                  DATAS
                        DATA: D+007+ASP+ACC+X+DATA
                              D+008+ASP+ACC+Y+DATA
                        DATAL
                        DATA: D+009+ASP+ACC+Z+DATA
                        D+014+ASP+LOC+X+DATA
                  DATAS
                  LATAL
                         D+015+ASP+LOC+Y+DATA
                  DATAL
                         D+016+ASP+LOC+Z+DATA
                  DATAL
                         D+021+ASP+TIME+DATA
                  DATAS
                         D+022+ASP+VEL+X+DATA
                  DATAL
                         D+023+ASP+VEL+Y+DATA
                  DATA:
                         D+024+ASP+VEL+7+DATA
      ALPHA:
             - A+23+NELS+THREAT+TARLE+UPDATE+ALPHA
         INPUTS
            FILE:
                   F+13+NFLS+EMISSION+THREAT+TABLE+FILE
             (*)
            FILE:
                   F+25+NELS+TYPED+EMITTEP+REPORT+FILE
             ( * )
         OUTPUTS
            FILE
                   F+13+NELS+FMISSION+THREAT+TABLE+FILE
             (*)
      DATA: D+140+T80+DATA
      ENTITY+TYPE: ET+1+NELS+EMISSION+THPEAT+ET
         ASSOCIATES
            FILE: F+13+NELS+EMISSION+THREAT+TABLE+FILE
             (*)
SUBNET:
         S+4+MODEL+NELS+PLATFORM+SUR
   REFERS TO
      ALPHA: A+01+DME+INS+MUISE+REMERATION+ALPHA
         INPUTS
                  DATA:
                         DEGISEASPERITCHEDATA
                         D+019+ASP+POLL+DATA
                  DATAL
                         D+025+ASP+YAH+DATA
                  ZATAG
                  SATAS
                         D+010+ASP+ALTITUDE+DATA
                         D+012+ASP+LATITUDE+DATA
                  DATA:
                         D+017+ASP+LONGITUDF+DATA
                  DATA:
                        DATA: DEGOTEASPEACCEXEDATA
                        DATA: DEGUREASPEACCEYEDATA
                        DATA: D+009+48P+ACC+Z+DATA
                  SATAG
                         D+014+ASP+LOC+X+DATA
                  DATAS
                         D+015+ASP+LOC+Y+DATA
                  DATA:
                         De016+ASP+LOC+7+DATA
                  DATAL
                         DEDZIESPETIME EDATA
                  DATAS
                         D+022+ASP+VEL+Y+DATA
                         D+023+ASP+VEL+Y+DATA
                  DATA:
                         D+024+ASP+VEL+Z+DATA
                  DATA:
         OUTPUTS
                  DATA:
                         D+018+ASP+PITCH+DATA
                         DE019+ASP+ROI L+DATA
                  DATA:
                         D+025+ASP+YAH+DATA
                  CATA:
                  DATAL
                         D+010+ASP+ALTITUDE+DATA
                  0474:
                         D+112+ASP+LATITUDE+DATA
                  DATAL
                         P+017+ASP+LONGITUDE+DATA
                        DATA: D+007+4SP+4CC+X+DATA
                              D+008+45P+ACC+Y+DATA
                        DATA:
                              D+009+ASP+ACC+Z+DATA
                        DATAS
                  DATA: D+014+ASP+LUC+X+DATA
```

```
DATA: D+015+ASP+LOC+Y+DATA
                 DATA: P+016+ASP+LOC+Z+DATA
                 DATA: D+021+ASP+TIME+DATA
                 DATA:
                        D+022+ASP+VEL+X+DATA
                 DATA:
                        T+023+ASP+VEL+Y+DATA
                 DATA: D+024+ASP+VEL+7+DATA
     ALPHA:
            A+02+GENEPATE+DME+ALPHA
         INPUTS
           FILE: F+06+FLIGHT+PROFILE+FILE (*)
           FILF:
                  F+27+PLATFORM+CONTROL+FILE (*)
        INPUTS
                 DATA:
                        D+002+ASET+MSG+DEST+DATA
                 DATA:
                        D+004+ASET+MSG+NAME+DATA
                 DATA: D+005+ASET+MSG+SOURCE+DATA
           DATA: C+141+TIME+DATA
        OUTPHIS
                 DATA: D+002+ASET+MSG+DEST+DATA
                 DATA: D+004+ASET+MSG+NAME+DATA
                       Denoseasetemsgesourceedata
                 DATA:
                       DATA: D+007+ASP+ACC+X+DATA
                       DATA: D+008+ASP+ACC+Y+DATA
                       DATA: D+009+ASP+ACC+Z+DATA
                 DATA: D+014+ASP+LOC+X+DATA
                 DATA:
                        D+015+ASP+LOC+Y+DATA
                 DATA:
                        D+016+ASP+LOC+7+DATA
                 DATA: D+021+ASP+TIME+DATA
                 DATA: D+G22+ASP+VEL+X+DATA
                 DATA: D+023+ASP+VEL+Y+DATA
                 DATA: D+024+ASP+VEL+Z+DATA
     ALPHA: A+03+GENERATE+INS+ALPHA
         INPUTS
                 DATA: D+010+ASP+ALTITUDE+DATA
                 DATA: P+012+ASP+LATITUDE+DATA
                 DATA: D+017+ASP+LONGITUDE+DATA
                       DATA: D+007+ASP+ACC+X+DATA
                       DATA: D+008+ASP+ACC+Y+DATA
                       DATA: D+009+ASP+ACC+Z+DATA
                 DATA: D+014+ASP+LOC+X+DATA
                 DATA: D+015+ASP+LOC+Y+DATA
                 DATA: D+016+ASP+LOC+Z+DATA
                 DATA: D+021+ASP+TIME+DATA
                 DATA: D+027+ASP+VEL+X+DATA
                 DATA: D+023+ASP+VEL+Y+DATA
                 DATA: D+024+ASP+VEL+7+DATA
        DUTPHIS
                 DATA: D+018+ASP+PITCH+DATA
                 DATA: D+019+ASP+ROLL+DATA
                 DATA:
                        D+025+ASP+YAW+DATA
                 DATA:
                        D+010+ASP+ALTITUDE+DATA
                        D+012+ASP+LATITUDE+DATA
                 DATA:
                 DATAS
                        D+017+ASP+LONGITUDE+DATA
     DATA: D+140+TBD+DATA
     ENTITY+TYPE: ET+3+NELS+FLIGHT+ET (+)
SUBNET: S+5+MODEL+NELS+SENSOR+SUB
  PEFERS IN
     ALPHA:
             A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
         INPUTS
           FILE: F+10+NFLS+CAMDIDATE+TARGETS+FILE
```

```
(*)
     FILE:
             F+20+NFLS+PRF+RRIEFED+40I+FILE
       (*)
   OUTPUTS
      FILE:
             F+10+NELS+CANDIDATE+TARGETS+FILE
       (*)
   INPUTS
            DATAL
                   De018+ASP+PITCH+DATA
            DATA:
                   D+019+ASP+ROLL+DATA
            DATAL
                   D+025+ASP+YAH+DATA
                   D+010+ASP+ALTITUDE+DATA
            DATAS
                   P+012+ASP+LATITUDE+DATA
            DATA:
                  D+017+ASP+LONGITUDE+DATA
            DATAL
                  DATA: D+007+ASP+ACC+X+DATA
                         D+00#+ASP+ACC+Y+DATA
                  DATAS
                  DATA: D+009+ASP+ACC+Z+DATA
            DATA: 0+014+ASP+LOC+X+DATA
            :ATAC
                  D+015+ASP+LOC+Y+DATA
                   D+016+ASP+LOC+Z+DATA
            DATAS
                  D+021+ASP+TIME+DATA
            DATA:
            DATAL
                   D+022+ASP+VEL+X+DATA
            DATAS
                   D+023+ASP+VEL+Y+DATA
            DATA: D+024+ASP+VEL+Z+DATA
ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
   INPUTS
      FILES
      F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
         CONTAINS
                  DATAT
              U+053+B+NFLS+FMISSION+START+TIME+DATA
                  DATAS
                 D+064+NELS+EMISSION+STOP+TIME+DATA
                  DATA:
      D+073+B+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA
                  DATAS
                  D+075+B+NELS+EMITTEP+ID+DATA
                  DATA:
   D+DB1+R+MELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
                  DATAS
                  D+082+NELS+EMITTER+VEL+X+DATA
                  DATAS
                  D+083+NELS+EMITTER+VEL+Y+DATA
                  DATA:
                  D+084+NELS+EMITTER+VEL+Z+PATA
                  DATA:
                  D+085+B+NELS+EMITTER+X+DATA
                  DATA:
                  D+086+B+NELS+EMTTTER+Y+DATA
                  DATA:
                  D+087+B+NELS+EMITTER+Z+DATA
                  DATAS
                  D+130+B+SCENAPIN+GEN+ID+NUM+DATA
         CRUEHED BY
            DATA: D+075+B+NELS+EMITTER+ID+DATA
      FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE
         COMTAINS
                  CATA:
                  D+067+NELS+FMITTER+RANDWIDTH+DATA
```

```
DATAS
         D+077+A+NFLS+FMITTER+MODULATION+TYPE+DATA
             D+078+A+NFLS+FMITTER+FUWER+LEVEL+DATA
     FILE:
           F+21+NFLS+PRE+RRTEFED+SOI+FILE
      (*)
  OUTPUTS
     FILE:
            F+10+NFLS+CANUIUATE+TARGETS+FILE
      (*)
  INPUTS
           DATA: D+018+ASP+PITCH+DATA
           DATA: D+019+ASP+POLL+DATA
           DATA: DECISE ASPEYANEDATA
           DATA: D+010+ASP+ALTITUDE+DATA
           DATA: D+012+ASP+LATITUDE+UATA
           GATA: D+017+ASP+LONGITUDE+DATA
                 DATA: De007+4SP+4CC+X+DATA
                        D+008+ASP+ACC+Y+DATA
                 UATAL
                 DATA: DECOGEASPEACEEZEDATA
           DATA: DEDIGEASPELOCEXEDATA
           DATA: DE015+ASPELUCEY+DATA
           DATA:
                  DEPTHEASPEL OCETERATA
           DATA: NEO21+ASP+TIME+DATA
           DATA: DE022-ASP-VEL-X-DATA
           DATA: DEDZZEASPEVELEYEDATA
            DATA:
                  DE024EASPEVELETEDATA
     DATA: DEGGIANELSEFREQUENCYESCAMEDATA
ALPHA:
A+19+NET S+SIGNAL+TU+NOISE+OFTFCTAPILITY+ALPHA
   INPUTS
      FILF:
            F+10+NFLS+CAMOTDATF+TAPGETS+FILE
       (*)
      FILE: F+26+NFLS+XEATHER+CONDITIONS+FILE
         COMININS
                        DATAL
                        DEU37+CLUIID+COVER+DATA
                        DATA:
                        D+120+PRECIPITATION+DATA
                  DATAS
                  0+039+ELEVATION+WEATHER+DATA
            DATA: DE144EXENEATHERELUCEDATA
            DATA: D+146+Y+WEATHER+LUC+DATA
   DUTPHIS
            F+10+WFLS+CAMUIDATF+TARGETS+FILE
      FILF:
       ( * )
   INPUTS
            DATA: 0+018+ASP+PITCH+DATA
                  D+019+ASP+ROLL+DATA
            DATAL
                   D+025+ASP+YA4+DATA
            DATA:
            DATAL
                   NEGITE ASPEALTITUDE FORTA
            DATA:
                   N+012+ASP+LATITUDE+DATA
            DATA: D+017+ASP+LONGTTHOF+DATA
                  DATA: PHOOTHASPHACEHYHDATA
                  DATAL DEGOREASPEACCEYEDATA
                  DATA: DEDOGEASPEACCEZEDATA
            DATAL
                  DE014EASPELOCEXEDATA
                  D+015+4SP+LOC+Y+DATA
            SATAC
            DATA: N+016+ASP+LOC+Z+PATA
```

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RONET:

REFERS TO

```
DATAS
                             D+021+ASP+TIME+DATA
                      DATA:
                             N+022+ASP+VEL+X+NATA
                      DATAS
                             D+023+ASP+VEL+Y+DATA
                      DATA:
                             D+024+ASP+VEL+Z+DATA
          ALPHA:
                 A+22+NELS+TERRAIN+FOLJAGE+SHADOWING+ALPHA
             INPUTS
                FILF: F+08+HYPSO+DATA+FILE
                   CONTAINS
                      DATAL
                             D+051+HYPSO+ELEV+DATA
                      DATA:
                             D+052+HYPSO+LOC+X+DATA
                      DATA: D+053+HYPSO+LOC+Y+DATA
                FILE
                       F+10+NELS+CANDIDATE+TARGETS+FILE
                 ( * )
             OUTPUTS
                FILF:
                       F+12+DETECTED+CANDIDATE+TARGETS+FILE
                 (*)
             INPUTS.
                      DATA:
                             D+01P+ASP+PITCH+DATA
                      DATAL
                             D+019+ASP+POLL+DATA
                      DATAL
                             D+025+ASP+YAN+DATA
                      TATAC
                             D+010+ASP+4LTITUDE+DATA
                      DATAL
                             N+012+ASP+LATITUNE+DATA
                             De017+ASP+LONGITHDF+DATA
                      DATA:
                            DATA: D+007+ASP+ACC+X+DATA
                            DATA:
                                   D+008+ASP+ACC+Y+DATA
                            L'ATA:
                                   DEDOREASPEACEEZEDATA
                      DATAL
                             D+014+ASP+LOC+Y+DATA
                      DATA:
                             D+015+ASP+LOC+Y+DATA
                      DATA:
                             D+016+ASP+LOC+7+DATA
                      DATAL
                             D+021+ASP+TIME+DATA
                             D+022+ASP+VEL+X+DATA
                      DATA:
                             D+023+ASP+VEL+Y+DATA
                      DATA:
                      DATA: P+024+ASP+VEL+7+PATA
          DATA: D+140+TBD+DATA
          ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
             ASSUCIATES
                FILT:
                FAIMANEL SAEMITTERHACTIVITYAGROUNDATRUTHAFTLE
                 (*)
          ENTITY+TYPE: ET+5+NELS+PRE+HRIFFFU+SOI+ET
           (*)
          ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
             ASSOCIATES
                FILE: F+15+NFLS+FMITTER+CHARACTERISTICS+FILE
                 (*)
          ENTITY+TYPE: ET+7+NELS+WEATHFR+ET
             ASSOCIATES
                FILE: F+26+NFLS+WEATHER+COMDITIONS+FILE
                 (*)
          EMITITY+TYPE: ET+R+NELS+PPE+BRIEFFD+ADI+LT
           (*)
          EMITTY+TYPE:
          ET+9+SIGNAL+NCISE+CANDIDATE+TARCETS+ET
             ASSUCIATES
                       F+10+NFLS+CANDIDATF+TARGETS+FILE
                FTLF:
                 (*)
R+2+MODEL+NFLS+SEMSOR+SYSTEM+P+NET
```

```
ALPHA: 4+04+INITIALIZE+NELS+ALPHA
  INPUTS
     FILE: F+16+NFLS+EMITTER+FILE
         CONTAINS
                        D+D63+A+NELS+EMISSION+START+TIME+DATA
                  DATAL
                         C+064+A+NELS+EMISSION+STOP+TIME+PATA
                  DATA:
                  DATAL
                  D+073+A+NELS+EMITTER+FREQUENCY+RANDHIDTH+DATA
                  DATA: D+075+A+NELS+EMITTER+ID+DATA
                  DATAL
               D+081+A+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
                  DATA: 0+082+A+NELS+EMITTFR+VFL+X+DATA
                         D+083+4+HEL S+EMITTFR+VFL+Y+DATA
                  TATAG
                         C+084+4+NELS+EMITTER+VFL+Z+DATA
                  DATAL
                         DEDOSEATHELSEEMITTEREXEDATA
                  DATAL
                         D+086+A+NELS+EMITTER+Y+DATA
                  L) A T A :
                         C+087+4+NELS+EMITTER+Z+DATA
                  DATAL
                  DATA: D+130+4+SCFNARIG+GEN+ID+NUM+DATA
   NUTPUTS
            F+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE
      FILF:
       (*)
            FA15+HFLS+FMITTER+CHARACTERISTICS+FILE (*)
      FILE:
   CREATES
      ENTITY+CLASS: FC+1+MELS+DETECTABLE+EMISSION+RRFAKOUT+EC
         COMPOSED OF
            ENTITY+TYPE:
            ET+10+GPUHNE+SHAUDWING+CANDIDATE+TARGETS+ET
               ASSOCIATES
                  FILE: F410+NELS+CANDIDATF+TARGETS+FILE
                   (*)
                         F+12+DFTECTED+CANDIDATF+TARGFTS+FILE
                  FILF:
                   (*)
            FHITTY+TYPE: FT+5+NELS+PRE+BPIEFEU+SOI+ET
             (*)
            ENTITY+TYPE: ET+R+MELS+PRE+BRIFFFD+A01+ET
             (+)
            ENTITY+TYPE:
            ET+9+SIGNAL+NCISE+CANDIDATE+TARGETS+ET (*)
         ASSOCIATES
            DATA: P+140+THP+PATA
      ENTITY+CLASS: FC+2+NFLS+SCENARTO+EC
         COMPOSED OF
            ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
             (*)
            ENTITY TYPE: ET+7+NELS+WEATHER+ET (*)
         ASSOCIATES
            DATAL NeluneThO+DATA
      ENTITY+CLASS: FC+3+NFLS+TASKS+EC
         COMPOSED OF
             ENTITY+TYPE: ET+3+MELS+FLIGHT+ET (+)
                          ET+4+NELS+FREQUENCY+SCAN+ET
             ENTITY+TYPE:
                ASSOCIATES
                   FILE: F+19+NELS+FREQUENCY+SCAN+FILE
                      CONTAINS
                               DATA:
                            D+092+NELS+FRED+SCAN+LOWER+FRED+DATA
                            D+093+NELS+FRED+SCAN+UPPER+FRED+DATA
```

```
ASSOCIATES
           DATA: D+140+THD+DATA
     ENYLTY+CLASS: EC+4+NELS+THREAT+EC
         COMPOSED OF
           ENTITY TYPE: ET+1+NELS+EMISSION+THPEAT+ET
             (*)
         ASSOCIATES
            DATA: DE140+TBD+DATA
     ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
         COMPOSED OF
            ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
             (*)
         ASSOCIATES
            DATA: 0+140+TBD+DATA
     ENTITY+CLASS: EC+6+DETECTED+EMISSIONS+INFO+EC
         COMPOSED OF
            ENTITY+TYPE:
                         ET+11+DETECTED+EMISSIONS+DD+TDOA+ET
               ASSOCIATES
                  FILE:
                  F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                   (*)
                  FILE:
                        F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
                   (*)
            ENTITY+TYPE: ET+12+DETECTED+EMISSIONS+COARSE+ET
               ASSOCIATES
                  FILE:
                  F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                   (*)
                  FILE
                        F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
                   (*)
            ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+ET
               ASSOCIATES
                  FILE:
                  F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                   (*)
                  FILE:
                        F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
                   (*)
ALPHA:
       A+09+NELS+MAKE+SENSOP+REGUESTS+ALPHA
   OUTPUTS
            DATA: N+902+ASET+MSG+DEST+DATA
            DATA: D+004+ASET+MSG+NAME+DATA
            DATA: D+005+ASET+MSG+SOURCE+DATA
     DATAS
            D+125+PEG+DESTINATION+SENSOR+ID+DATA
            D+126+RED+REPORT+INFORMATION+TYPE+DATA
     DATA:
            D+127+PER+SENSOR+TARGET+ID+OF+INTEREST+DATA
     DATA:
            D+135+SENSOR+ID+DATA
     DATA:
     MESSAGE: M+10+NE(S+SENSOR+REQUESTS+MSG+OUT (*)
ALPHA: A+10+NELS+MODIFY+ORBIT+ALPHA
  INPUTS
            F+06+FLIGHT+PROFILE+FILE (*)
     FILE:
      FILE:
            F+32+SFNSOR+CRBIT+MODS+FILE
         CONTAINS
            DATA:
                   D+117+FLATFOPM+MOD+X+DATA
                  D+118+PLATFORM+MOD+Y+DATA
            DATA:
            DATA:
                  D+119+PLATFORM+MOD+Z+DATA
   OUTPUTS
     FILE: F+06+FLIGHT+PROFILE+FILE (+)
```

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```
INPUTS
     DATA: D+135+RENSOR+ID+DATA
      A+11+NELS+MODIFY+TASK+ALPHA
ALPHA:
  INPUTS
     FILE:
            F+05+FEASIBLE+ACTIVITY+AREA+FILE
         CONTAINS
           DATA:
                  D+143+X+LOC+FEASIBLE+DATA
            DATA:
                  N+145+Y+LOC+FEASIBLE+DATA
     FILE: F+06+F1 IGHT+PROFILE+FILE (+)
  OUTPUTS
     FILE:
            F+06+FLIGHT+PROFILE+FILE (*)
   INPUTS
            D+056+NEFOED+FFASIBLE+DATA
     DATAL
            D+139+TASK+Q! E+10+DATA
     DATA:
     DATA: D+141+TIME+DATA
  OUTPUTS
            DATA: DEGOZEASETEMSGEDESTEDATA
            DATA: DEGOULASET+MSG+NAME+DATA
            DATA: N+005+ASET+M5G+SOURCE+DATA
           - Del 3Retasking+Pesponse+Data
     DATA:
     DATA: P+139+TASK+QLE+1D+DATA
     DATA: D+141+TIME+DATA
  FORMS
      MESSAGE: M+13+NELS+TASKING+RESPONSES+MSG+OUT (#)
ALPHA: A+14+NELS+PROCESS+COMMANDERS+PERUIREMENTS+ALPHA
   INPUTS
      FILE: F+04+CMDRS+DATA+TO+UPDATE+FILE
         CONTAINS
            DATA: D+040+FIRST+CMDRS+REQ+UPDATE+DATA
            DATA: N+133+SECOND+CMDRS+RFQ+UPDATE+DATA
      FILE:
            F+20+NFLS+PRF+RRIEFED+ADI+FILE (+)
      FILE:
            F+21+NFLS+PRE+PRTEFED+SOJ+FILE (+)
   CUTPUTS
      FILE:
            F+20+NFLS+PRF+BRIEFED+A0I+FILE (*)
      FILE: F+21+NFLS+PRF+BRIEFED+SOI+FILE (*)
ALPHA:
       A+15+MELS+PPOCESS+PRIORITTZED+SENSOR+DIRECTIONS+ALPHA
   INPUTS
      FILE: F+05+FFASIPLE+ACTIVITY+AREA+FILE (*)
      FILE: F+19+NFLS+FREGUENCY+SCAN+FILE (+)
   CUTPUTS
      FILE: F+19+NFLS+FREUUENCY+SCAN+FILE (*)
   INPUTS
      DATA:
            D+054+MEEDFD+FEASIBLE+DATA
            D+135+SENSOR+ID+DATA
      DATAL
      DATA: D+137+GEMSOR+PRIORITY+DATA
AL PHA:
       - A+16+NELS+PROCESS+REQUESTED+DATA+ALPHA
   INPUTS
            F+06+FLIGHT+PROFILE+FILE (+)
      FTLE:
      FILE: F+07+GROUP+TARGET+LOCS+FILE (*)
   OUTPUTS
      FILE: F+06+FLIGHT+PROFILE+FILE (*)
   INPUTS
      DATA: D+045+GPS+JO+DATA
ALPHA: A+24+PESET+NELS+ALPHA
   DESTROYS
      ENTITY+CLASS: FC+2+NELS+SCENARIO+EC (*)
      ENTITY+CLASS: FC+3+NFLS+TASKS+EC (+)
      ENTITY+FLASS: EC+4+NELS+THREAT+EC (+)
```

```
ENTITY+CLASS: FC+5+NFLS+VEHICLE+CHARACTERISTICS+EC
      (*)
     ENTITY+CLASS: FC+6+DETECTED+EMISSIONS+INFO+EC (*)
       A+25+UPDATE+CARTO+ALPHA
ALPHA:
  INPUTS
     FILE: F+01+BPIDGE+LUCATIONS+FILE
         CONTAINS
                  DE026+PRIDGE+LOC+X+DATA
           DATA:
                 DE0274PRIDGE+LDC+Y+UATA
           DATAS
     FILE: F+02+CARTO+UPDATE+FILE (*)
     FILE: F+03+CITY+LUCATIONS+FILE
         CUSTAINS
                  N+035+CITY+LOC+X+DATA
            DATAL
            DATA: D+036+CITY+LCC+Y+DATA
      FILE: F+08+HYPSU+D4T4+FILE (+)
      FILF: F+09+MANSHALLING+AREAS+FILE
         CUNTAINS
            DATA: DEOS4+MARSHALLING+X+DATA
            DATA: D+055+YARSHALLING+Y+DATA
      FILE: F+28+PRIMARY+HOADS+FILE
         CONTATAS
                  D+121+PRIMARY+ROADS+X+DATA
            DATAS
            DATA: D+122+PRTMARY+POADS+Y+DATA
      FILF: F+29+RAILHOAD+LOCATIONS+FILE
         CONTAINS
            DATA: D+123+RAILRUAU+LOC+X+DATA
            DATA: D+124+PATERDAD+LOC+Y+DATA
      FILE: F+30+HIVFR+LCCATIUMS+FILE
         CONTAINS
                  DE128-9IVER+LUC+X+DATA
            DATAI
            DATA: P+129+#IVER+LOC+Y+DATA
      FILE: FE31+SFCONDATY+HOADS+FILE
         CONTAINS
            DATA: Nº131+SECONDARY+POAD+X+UATA
            DATA: 0+132+SECONDARY+RUAD+Y+DATA
   OUTPHIS
            F+01+AFIFGF+LUCATIONS+FILE (*)
      FILE:
            F+03+CTTY+LUCATIONS+FILE (*)
      FILE
      FILE
            F+OB+HYPSO+DATA+FILE (+)
            F+09+4AKSHALLING+AREAS+FILE (*)
      FILF:
            F#28#PRIMARY#ROADS#FILE (*)
      FILF:
      FILE:
            F+29+RAILROAD+LOCATIONS+FILE (+)
            F+3U+RIVFH+LCCATIONS+FILE (*)
      FILE:
            F+31+SFCONDARY+ROADS+FILE (*)
      FILE:
   INPUTS
            - NHOZAHCARTOHMAPHSECTHNUMHDATA
      DATAL
   OUTPUTS
      DATA: D+029+CAPTO+YAP+SECT+NUM+DATA
DATA: D+004+ASFT+ 48G+NAMF+DATA
DATA: D+140+THD+DATA
ENTITY+TYPE: ET+3+NELS+FLIGHT+FT (+)
ENTITY+TYPE: ET+4+NELS+FFEQUENCY+SCAN+FT (+)
ENTITY+TYPE: ET+5+MELS+PRE+6RIFFED+SOI+ET (*)
ENTITY+TYPE: ET+8+MELS+PRE+ARIFFED+ADI+LT (+)
INPUT-INTERFACE: INTO-MELS-SENSUR
   PASSES
      MESSAGE: MODIFESTALSTUNITOANDOLNVIRONMENTOATACMSGOIN
         MADE BY
```

```
FILF: F+16+NELS+EMITTER+FILE (*)
   MADE BY
            DATA:
                   D+002+ASET+MSG+DEST+DATA
                   D+004+ASET+MSG+NAME+DATA
            DATAS
            DATA: D+005+ASET+MSG+SOURCE+DATA
MESSAGE :
         M+02+NELS+CARTO+UPDATES+MSG+IN
   MADE BY
     FILE:
            F+02+CARTO+UPDATE+FILE (*)
   MADE BY
                   D+002+ASET+MSG+DEST+DATA
            DATA:
            DATA:
                  D+004+ASET+MSG+NAME+DATA
            DATA: D+005+ASFT+MSG+SOURCE+DATA
MESSAGE: M+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN
   MADE BY
      FILE: F+04+C"GRS+DATA+TO+UPDATE+FILE (*)
   MADE BY
            DATA: D+002+ASET+M3G+DEST+DATA
                  D+004+ASFT+MSG+NAMF+DATA
            DATA:
            DATA: P+005+ASFT+MSG+SOURCF+DATA
MESSAGE:
         Meduenel semodiftenetaskensgein
   MADE BY
     FTLE:
           F+05+FFASIPLE+ACTIVITY+AREA+FILE (*)
   MADE BY
            DATA: D+002+ASFT+MSG+DFST+DATA
            DATA: PEROUMENSETHMSGENAMEERATA
            DATA: E+005+ASET+MSG+SOURCF+DATA
      DATA: N+056+NEFUFD+FFASIPLE+DATA
      DATA: D+139+TASK+QUE+ID+DATA
MESSAGE: M+0A+NFLS+OPHIT+MODIFICATIONS+MSG+IN
   HADE BY
      FILE: F+32+SFNSUR+CRRIT+MUDS+FILE (*)
   MADE BY
            DATA: P+002+ASET+MSG+DFST+DATA
                  Deno4easeTemsGenameeDATA
            DATA:
            DATA: D+005+ASET+MSG+SOURCE+DATA
      DATA: P+135+SENSOR+ID+DATA
MESSAGE: M+09+MELS+PRIORITIZED+SENSOP+DIPECTIONS+MSG+IN
   MADE BY
      FILE:
            F+05+FEASIBLE+ACTIVITY+AFEA+FILE (*)
   MADE BY
            DATA: D+002+ASET+MSG+DFST+DATA
            DATA: SHOO4+ASET+MSG+NAME+DATA
            DATAL
                  P+005+ASET+MSG+SOURCE+DATA
      UATA:
            - 9+056+NEFDEU+FEASIPLE+DATA
      DATA: Nº135+SENSOR+IP+DATA
      DATA: De157+SENSOR+PRIORITY+DATA
         MOUDENEL SERFQUESTEDESFNSOREDATAEMSGEIN
MESSAGE:
   MADE BY
            FANTAGROUPATARGETALUCSAFILE (*)
      FTLE:
   MATIE BY
            DATA: DEGOZEASETEMSGEDESTEDATA
                  CHOOMEASETEMSGENAMFEDATA
            DATAL
                  D+005+ASFT+MSG+SOUPCE+DATA
            DATAS
      DATAL
            N+045+GPS+TD+DATA
MESSAGE:
         MEISETEANDECESTOPENELSEMSGETN
   MAPE HY
            UATA:
                   D-002+ASFT+MSG+LEST+DATA
            DATAS
                   C+004+ASET+MSG+NAME+DATA
```

DATA: D+005+ASET+MSG+SOURCE+DATA

QUITPUT+INTERFACE: TO+TIMING+AND+COMTROL+FROM+NELS (*)

SUBNET: S+1+CHECK+NELS+SENSOP+STATUS+SUB (*)

*ERROR 2460 REPETITIVE DATA SETS(RCS) CONTAIN COMMON MEMBERS

RDS1# ENTITY+CLASS: EC+1+NELS+DFTFCTABLE+EMISSION+BREAKOUT+FC

RDS2# ENTITY+CLASS: EC+2+MELS+SCENARIO+EC

CUMMON MEMBERS=

DATA: D+140+TRD+DATA

*ERROR 2460 REPETITIVE DATA SETS(ROS) CONTAIN COMMON MEMBERS
RUS1= FNTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+FC
RDS2= FNTITY+CLASS: EC+3+NELS+TASKS+EC
COMMON MEMBERS=
DATA: D+140+TBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(ROS) CUNTAIN CUMMON MEMBERS

RDS1# ENTITY+CLASS: EC+1+MELS+UFTFCTARLE+FMISSION+BREAKOUT+FC

RDS2# ENTITY+CLASS: EC+4+MELS+THREAT+FC

CUMMON MEMBERS#

DATA: D+140+TRU+DATA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS

RDS1# ENTITY+CLASS: EC+1+NELS+DFTFCTARLE+FMISSION+BPEAKOUT+FC

RDS2# FNTITY+CLASS: EC+5+NELS+VFHICLE+CHAPACTEHTSTIFS+EC

COMMON MEMBERS#

DATA: D+140+IBD+DATA

#ERROR 2460 REPETITIVE DATA SETS(ROS) CONTAIN COMMON MENBERS RDS1# ENTITY+CLASS: EC+2+4ELS+SCEMARIO+EC RDS2# ENTITY+CLASS: EC+3+4ELS+TASKS+EC COMMON MEMBERS# DATA: D+140+TAD+D+TA

#ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS
PDS1# FNTITY+CLASS: EC+2+NELS+SCENARIO+EC
RDS2# FNTITY+CLASS: EC+4+NELS+THREAT+FC
COMMON MEMBERS#
PATA: D+140+TBD+DATA

*ERROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS
RDS1# ENTITY+CLASS: EC+2+NELS+SCENAPIO+EC
RDS2# FNTITY+CLASS: FC+5+NELS+VFHICLE+CHARACTERISTICS+EC
COMMON MEMBERS=

#EPROR 2460 REPETITIVE DATA SETS(RDS) CONTAIN COMMON MEMBERS
HDS1# FNTITY+CLASS: EC+3+MELS+TASKS+EC
RDS2# FNTITY+CLASS: EC+4+MELS+THRFAT+FC
COMMON MEMBERS#
DATA: D+140+TBD+DATA

DATAS DE140+TRD+DATA

#ERROR 2460 REPETITIVE DATA SETS(RPS) CONTAIN COMMON MEMBERS
RUSI ENTITY+CLASS: EC+3+NELS+14SKS+EC
RD92 ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
COMMON MEMBERS
DATA: D+140+TRD+DATA

*ERROR 2460 PEPETITIVE DATA SETS(MOS) CONTAIN COMMON MEMBERS

NELS DATA FLOW ANALYSIS

```
ROSI = FNTITY+CLASS: EC+4+NELS+THREAT+FC
PDS2= FNTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTFRISTICS+EC
COMMON MEMBERS=
     CATA: D+140+TPD+DATA
```

==* ANALYZE DATA FLOW FOR PANET: R+1+HANDLE+NELS+SENSOR+AND+GPS+PROCESSING+R+NET *ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED. ENTITY+CLASS: EC+1+NELS+DFTECTABLE+EMISSION+BRE&KOUT+EC ENTITY+CLASS: EC+2+NELS+SCENARIO+EC ENTITY+CLASS: EC+4+NELS+THREAT+EC ENTITY+CLASS: EC+5+NELS+VFHICLE+CHARACTERISTICS+EC. * ERROR DETECTED AT SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET * PRECEDED BY SUBNET: S+4+MODEL+MELS+PLATFORM+SUB

* PRECEDED BY SUBNET: SEPENDENELSEOPERATIONALECONTROLESUB * PRECEDED BY RENET: RELEMBNDLE+MELS+SENSOR+AND+GPS+PROCESSING+RENET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED. DATA: D+002+ASET+MSG+DEST+DATA DATA: U+004+ASET+MSG+NAME+DATA DATA: D+005+ASET+MSG+SCHRCE+DATA DATA: D+141+TIME+DATA. * ERROR OFTECTED AT ALPHA: A+02+GENERATE+DME+ALPHA

* PRECEDED BY SELECT-NODE ENTITY+TYPE: LT+3+NELS+FLIGHT+ET

* PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB

* PRECEDED BY SUBNET: S+2+DO+NELS+OPERATIONAL+CONTROL+SUR * PRECEDED BY RENET: REIGHANDLEENELSESENSOREANDEGREEPROCESSINGERENET

*ERROR 2664 INFORMATION ALWAYS USER REFORE ASSIGNED. ENTITY+CLASS: EC+1+NELS+DFTFCTABLF+FMISSION+BREAKOUT+EC ENTITY+CLASS: EC+2+NELS+SCENAPIO+EC ENTITY+CLASS: EC+4+NELS+THREAT+EC ENTITY+CLASS: EC+5+NELS+VEHICLE+CHAPACTERISTICS+EC. * ERROR DETECTED AT SFLECT-MODE ENTITY+TYPE: ET+3+MELS+FLIGHT+ET * PRECEDED BY SUBMET: SETECHFOKENELSESENSORESTATUSESUB * PRECEDED BY RETURN

* PRECEDED BY AND-NODE * PRECEDED BY RETURN

* PRECEDED BY ALPMA: A+01+DMF+INS+NOTSE+GENERATION+ALPMA

* PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA * PRECEDED BY ALPHA: A+0>+GENERATE+DME+ALPHA

* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET

* PRECEDED BY SUBMET: S+4+MCDEL+MELS+PLATFORM+SUB * PRECEDED BY SUBMET: S+2+D0+MELS+OPERATIONAL+COMTROL+SUR

* PPECEDED BY RENET: RELEMBLIFERELSESENSOREANDEGPSEPROCESSINGERENET

*EPROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED. ENTITY+CLASS: EC+P+MELS+SCENARIO+FC ENTITY+CLASS: EC+4+NEI S+THRFAT+FC ENTITY+CLASS: EC+5+MELS+VFHICLE+CHARACTERISTICS+EC. * EFROR DETECTED AT SELECT+MODE ENTITY+TYPE: ET+5+MELS+PPE+RPIFFEC+SOI+FT

* PRECEDED BY RETURN

* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
* PRECEDED BY SUBNET: S+1+CHECK+NELS+SENSOR+STATUS+SUB

```
* PRECEDED BY AND-NODE
  * PRECEDED BY RETURN
  * PRECEDED BY ALPHA: A+01+DMF+INS+NOISE+GENERATION+ALPHA
  * PRECEDED RY ALPHA: A+03+GENERATE+INS+ALPHA
  * PRECEDED BY ALPHA: A+02+GENERATE+DME+ALPHA
  * PRECEDED BY SELFCT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
  * PRECEDED BY SUBNET: S+4+MODEL+MELS+PLATFORM+SUB
  * PRECEDED BY SUBNET: SEREDUENELSEOPERATIONALECONTROLESUA
  * PRECEDED BY RENET: RETEMBLIFENELSESFINSOREANDEGPSEPROCESSINGERENET
*EPROR 2664 INFORMATION ALMAYS USED BEFORE ASSIGNED.
     ENTITY+CLASS: EC+2+NELS+SCENARIN+EC
     ENTITY+CLASS: EC+4+NELS+THREAT+EC
     ENTITY+CLASS: EC+5+NELS+VFHICLE+CHARACTERTSTICS+EC.
  * ERROR DETECTED AT SELECT=MORE ENTITY+TYPE:
  ET+8+NELS+PRE+BRIEFFO+ADI+ET
  * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFFU+SOI+ET
   * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+MELS+FLIGHT+FT
   * PRECEDED BY SUBMET: SHI+CHECK+NELS+SFNRGB+STATUS+SUB
   * PRECEDED BY RETURN
   * PRECEDED BY AND-NOVE
   * PRECEDED BY RETURN
  * PRECEDED BY ALPHA: A+01+DME+INS+NUISE+GENERATION+ALPHA
  * PRECEDED BY ALPHA: A+03+SEMERATE+INS+ALPHA
   * PRECEDED BY ALPHA: AGODEGENEPATE +UMEGALPHA
  * PRECEDED BY SFLECT-10DE ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
  * PRECEDED BY SUBBET: SHIPMUNELFHELSAPLATEDRIGHTUR
  * PRECEDED BY SUBMET: SHREDUHNELSHOPERATIONALHODWIRDLHSUB
   * PRECEDED BY RENET: RELEMBNOLEEMELSESENSOREANDERPSEPEDCESSINGERENET
*ERROR 2664 INFORMATION ALWAYS USED REFURE ASSIGNED.
     DATA: 0+135+SENSOR+ID+DATA.
   * ERROR DETECTED AT ALPHA: A+17+NELS+SENSOP+STATUS+ALPHA
   * PRECEDED BY SELECT-NODE EMPITY+TYPE: ET+8+NELS+PRE+BRIEFED+ADI+ET
   * PRECEDED BY SELECT-HODE ENTITY-TYPE: ET+5+NELS+PRE+ERIEFED+SDI+ET
   * PRECEDED BY SELECT-NUMB ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
   * PRECEDED BY SUBMET: SEI+CHECK+NELS+SENSOP+STATUS+SUB
   * PRECEDED BY HETURN
   * PRECEDED BY AND-HODE
   * PRECEDED BY RETURN
   A PRECEDED BY ALPHA: A+01+DMF+IMS+NOTSF+GENERATION+ALPHA
   * PRECEDED BY ALPHA: A+O3+GENEPATE+INS+ALPHA
   * PRECEDED BY ALPHA: 4+02+GE1EMATE+PME+ALPHA
   * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
  * PRECEDED BY SUBMET: SEMEMODELENELSEPLATFORMESUR
  * PRECEDED BY SUBNET: SAPARDANELSADEFRATIONALACONTROLASUB
  * PRECEDED BY RENET: RELEMANDLE ENELSES FINSURE AND ECHSEPROCESSING ERENET
```

```
DATA: D+002+ASET+MSG+DEST+DATA
         U+004+ASET+MSG+NAME+DATA
  DATAS
   DATA: D+005+ASET+MSG+SOURCE+DATA.
* ERROR DETECTED AT ALPHA: A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA
* PRECEDED BY AND-NODE
* PRECEDED BY RETURN
* PRECEDED BY ALPHA:
                     A+01+DME+INS+NOISE+GENERATION+ALPHA
* PRECEDED BY ALPHA!
                     A+03+GENERATE+INS+ALPHA
* PRECEDED BY ALPHA:
                      A+02+GENEFATE+DME+ALPHA
* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
* PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
* PRECEDED BY SUBNET: S+2+DO+NELS+OPERATIONAL+CONTPOL+SUB
* PRECEDED BY RONET: ROLLHANDLEONELSOSENSOROANDOGPSOPROCESSINGOROANT
```

*EPROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+1+NELS+DETFCTABLE+EMISSION+BREAKOUT+EC
ENTITY+CLASS: EC+2+NELS+SCENARIO+EC
ENTITY+CLASS: EC+4+NELS+THRFAT+FC.

* ERROR DETECTED AT SELECT=NODE ENTITY+TYPE:
E7+6+NELS+VFHICLE+CHARACTFRISTICS+ET

* PRECEDED BY SUBNET: S+S+MODEL+NELS+SENSOR+SUB

* PRECEDED BY AND=NODE

* PRECEDED BY AND=NODE

* PRECEDED BY ALPHA: A+01+DMF+INS+NOTSF+GEMERATION+ALPHA

* PRECEDED BY ALPHA: A+03+GEMERATE+INS+ALPHA

* PRECEDED BY ALPHA: A+03+GEMERATE+INS+ALPHA

* PRECEDED BY SELECT=NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET

* PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB

* PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB

* PRECEDED BY SUBNET: S+2+DQ+NFLS+DPERATIONAL+CONTROL+SUB

* PRECEDED BY R+NET: F+1+HANDLF+NELS+SENSOR+AND+GPS+PROCESSING+R+NET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED. ENTITY+CLASS: EC+1+MELS+DETECTABLE+EMISSION+BREAKOUT+FC ENTITY+CLASS: EC+4+NELS+THREAT+FC. * ERROR DETECTED AT SELECT-NOTE ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+FT * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+6+NELS+VFHICLE+CHARACTERISTICS+ET * PRECEDED BY SUBNET: S+S+MUDEL+NELS+SENSOR+SUB * PRECENED BY AND*NODE * PRECEDED BY RETURN * PRECEDED BY ALPHA: A+01+DMF+INS+NOISE+GENERATION+ALPHA * PRECEDED BY ALPHA: 4+03+GENEGATE+INS+ALPHA * PRECEDED BY ALPHA: A+02+GEMERATE+DME+ALPHA * PRECEDED BY SELECT-NUDE ENTITY+TYPE: ET+3+NELS+FLIGHT+FT * PRECEDED BY SUBNET: SHAHMODEL+MELSHPLATFORM+SUR * PRECEDED BY SUBMET: S+2+DO+4FLS+OPERATIONAL+CONTROL+SUB * PRECEDED BY RENET: HE14HANDLFENELSESENSOREANDERPSEPROCESSINGERENET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+4+NELS+THREAT+EC.

* ERROR DETFCTED AT SELECT-MODE ENTITY+TYPE:

```
ET+5+NELS+PRE+BRIEFED+SOI+ET
  * PRECEDED BY ALPHA: A+1A+MELS+SIGNAL+OF+INTERFST+FILTER+ALPHA
  * PRECEDED BY SELECT-NODE ENTITY+TYPE:
  ET+2+NELS+EMITTER+GROUND+TRUTH+ET
  * PRECEDED BY SELECT-NODE ENTITY+TYPE:
  ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
  * PRECEDED BY SUBNET: 3+5+MODEL+NELS+SENSOR+SUR
  * PRECEDED BY AND-NODE
  * PRECEDED BY RETURN
                        A+01+DHE+INS+NDISE+GENERATION+ALPHA
A+03+GENERATE+INS+ALPHA
A+02+GENERATE+DME+ALPHA
  * PRECEDED BY ALPHA:
  * PRECEDED BY ALPHA:
   * PRECEDED BY ALPHA:
  * PRECEDED BY SELECT-MODE EMITTY+TYPE: ET+3+NELS+FLIGHT+ET
  * PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
  A PRECEDED BY SUBNET: SEREDUENELSEDPERATIONAL CONTROLESUR
  * PRECEDED BY RENET: RELEMANDLEENELSESENSURFANDEGPSEPROCESSINGERENET
*ERROR 2664 INFORMATION ALWAYS USED REFURE ASSIGNED.
      ENTITY+CLASS: EC+4+NEIS+THREAT+FC.
   * ERROR DETECTED AT SELECT-NODE ENTITY+TYPE:
  ET+A+NELS+PPE+BRIEFFU+A0I+ET
  * PRECEDED BY ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTFR+ALPHA
   * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIFFFD+SDI+ET
  * PRECEDED BY ALPHA: A+18+NELS+STGNAL+OF+INTERFST+FILTER+ALPHA
   * PRECEDED BY SELECT-MODE ENTITY+TYPE:
  ET+2+NELS+EMITTER+GROUND+TRUTH+ET
  * PRECEPED BY SELECT-MODE ENTITY+TYPE:
  ET+6+NELS+VEHICLE+CHARACTFRTSTICS+ET
   * PRECEDED BY SUBMET: S+S+MODEL+NELS+SENSOR+SUR
   * PPECEDED BY AND-NODE
   * PRECEPED BY RETURN
```

*EPROR 2664 INFORMATION ALWAYS USED BEFORE ASSIGNED.

* PRECEMEN BY SUBNET: S+4+MONEL+NELS+PLATFORM+SUR

* PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA
* PRECEDED BY ALPHA: A+02+GENERATE+DME+ALPHA

FNTITY+CLASS: EC+4+NELS+THREAT+EC.

* EPROR DETECTED AT SFLECT-NORE ENTITY+TYPE: ET+7+MELS+WEATHER+ET

* PRECEDED BY SFLECT-NORE ENTITY+TYPE: ET+R+NELS+PPE+BRIEFED+ADI+ET

* PRECEDED BY ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA

* PRECEDED BY ALPHA: A+01+DHE+INS+HOISE+GENERATION+ALPHA

* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+FT

* PRECEDED BY SUBNET: S+2+DU+NFLS+OPERATIONAL+CONTROL+SUB

* PRECEDED BY SELECT-HUDE ENTITY-TYPE: ET-5-NELS-PPE-BRIEFED-SDI-ET

* PRECEPED BY RENET: REIGHANDLEENELSESENSOREANDERPSEPROCESSINGERENET

* PRECEDED BY ALPHA: A+18+MELS+SIGMAL+OF+INTERFST+FILTER+ALPHA

* PRECEDED BY SELECT-NUDE ENTITY+TYPE:

ET+2+NEL S+EMITTER+GPOUND+TRUTH+FT

* PRECEDED BY SELECT-NURE ENTITY+TYPE:

ET+6+NEI S+VFHICLE+CHARACTFHISTICS+ET

* PRECEDED BY SUBNET: SHRHHOLELANELSHSENSURHSUR

* PRECEDED BY AND-NODE

* PRECEDED RY RETURN

* PRECEDED BY ALPHA: A+01+DME+INS+NOISE+GENERATION+ALPHA

```
* PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA

* PRECEDED BY ALPHA: A+02+GENERATE+DME+ALPHA

* PRECEDED BY SELECT=NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET

* PRECEDED BY SUBNET: S+0+MODEL+NELS+PLATFORM+SUB

* PRECEDED BY SUBNET: S+2+D0+NELS+OPERATIONAL+CONTROL+SUB
```

* PRECEDED BY RENET: RESEMBLE SENSOPEANDE GPS PROCESSING FRENET

*ERROR 2664 INFURMATION ALWAYS USEC REFORE ASSIGNED. ENTITY+CLASS: EC+4+NELS+THREAT+EC. * ERROR DETECTED AT SELECT-NODE ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET * PRECEDED BY ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETECTABILITY+ALPHA * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+7+NELS+WEATHER+ET * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+ADI+ET * PRECEDED BY ALPHA: A+05+NELS+APEA+DF+INTEREST+FILTER+ALPHA * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+801+ET * PRECEDED BY ALPMA: A+1P+NELS+SIGNAL+OF+INTERFST+FILTER+ALPMA * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET * PRECEPED BY SELECT-NODE ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERISTICS+ET * PRECEDED BY SUBNET: S+5+MODEL+MELS+SENSOR+SUR * PRECEDED BY AND-NODE * PRECEDED BY RETURN * PRECEDED BY ALPHA: A+01+DME+INS+NDISE+GENERATION+ALPHA * PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA * PRECEDED BY ALPHA: A+02+SEMERATE+DME+ALPHA * PRECEDED BY SELECT-NORE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET * PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB * PRECEDED BY SUBNET: S+2+D0+NELS+OPERATIONAL+CONTROL+SUB

#ERROR 2740 ALPHA FORMS MORE THAM ONE MESSAGE THAT PASSES SAME INTERFACE #ALPHA: A+20+NELS+SURVEILLANCF+ANC+TRACK+MSGS+ALPHA
#ERROR 2740 ALPHA FORMS MORE THAN ONE MESSAGE THAT PASSES SAME INTERFACE #ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA
#ERROR 2661 INFORMATION ALWAYS REASSIGNED BEFORE USED.

DATA: DA002+ASFT+MSG+DFST+DATA

* PRECEDED BY RENET: RELEMANDLESHELSESENSOPEANDEGPSEPROCESSINGERENET

DATA: D+002+ASET+MSG+DEST+DATA
DATA: D+004+ASET+MSG+DATA
DATA: D+005+ASET+MSG+SOURCE+DATA.

* EPROR DETFCTED AT ALPHA:

A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA

* PRECEDED BY RETURN

* PRECEDED BY AND-NODE

* PRECEDED BY ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA

* PRECEDED BY ALPHA: A+07+MELS+FINE+LOCATION+ALPHA

* PRECEDED BY ALPHA: A+06+NELS+COARSE+LOCATION+ALPHA

* PRECEDED BY ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA

* PRECEDED BY SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB

* PRECEDED BY RETURN

* PRECEDED BY ALPHA: A+22+NELS+TEPRAIN+FOLIAGE+SHADOWING+ALPHA

* PRECEDED BY SELECT-NODE ENTITY+TYPE:

ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET

* PRECEDED BY ALPHA: A+10+NELS+SIGNAL+TO+NOISE+DETECTABILITY+ALPHA

```
* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+7+NELS+WFATHER+ET
  * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+8+NELS+PRE+BRIFFED+ADI+ET
  * PRECEDED BY ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
  * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SDI+ET
  * PRECEDED BY ALPHA: A+1R+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
  * PRECEDED BY SELECT-NODE ENTITY+TYPE:
  ET+2+NELS+EMITTER+GROUND+TRUTH+FT
  * PRECEDED BY SELECT-NODE ENTITY+TYPE:
  ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
  * PRECEDED BY SUBNET: S+5+MODEL+NELS+SENSOR+SUR
  * PRECEDED BY AND-NODE
  * PRECEDED BY RETURN
  * PRECEDED BY ALPHA: A+01+DME+TNS+NOISE+GENERATION+ALPHA
  * PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA
  * PRECEDED BY ALPHA: A+02+GENEPATE+DME+ALPHA
  * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
  * PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
  * PRECEDED BY SUBMET: S+2+DO+NELS+OPERATIONAL+CONTROL+SUB
  * PRECEDED BY RENET: RELEMANDLEENELSESENSOREANDERSEPROCESSINGERENET
*ERROR 2667 USE AND ASSIGNMENT FROM DIFFERENT PARALLEL PATHS.
     CATA: D+010+ASP+ALTITUDF+CATA
     DATA:
           D+012+ASP+LATITHDE+DATA
     PATA: D+014+ASP+LCC+X+DATA
     DATA: D+015+ASP+LOC+Y+DATA
     DATA: D+016+ASP+LOC+Z+DATA
     DATA: D+017+ASP+LONGITUDE+DATA
     DATA: D+022+ASP+VEL+X+DATA
     DATA: D+023+ASP+VEL+Y+DATA
     DATA: 0+024+ASP+VEL+Z+DATA
     DATA: D+091+NELS+FREQUENCY+SCAN+DATA
     ENTITY+CLASS: EC+1+NELS+DETECTARLE+EMISSION+BREAKOUT+EC
     ENTITY+CLASS: EC+2+NELS+SCENARID+EC
     ENTITY+CLASS: EC+3+NELS+TASKS+EC
     ENTITY+CLASS: EC+4+NELS+THREAT+FC
```

- * ERROR DETECTED AT AND-NODE
- * PRECEDED BY RETUPH
- * PRECEDED BY ALPHA: A+01+PME+INS+NOISE+GENEPATION+ALPHA

ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC

* PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA

ENTITY+TYPE: ET+3+NELS+FLIGHT+ET FILE: F+20+NELS+PRE+dRIFFED+AD1+FILE FILE: F+27+PLATFORM+CONTROL+FILE.

- * PRECEDED RY ALPHA: A+02+GENERATE+DME+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PPECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
- * PRECEDED BY SUBNET: SERFORENELSEOPERATIONALECONTROLESUB
- * PPECEDED BY RANKT: RAIAMANDLEANELSASENSURAANDAGPSAPROCESSINGARANET

#ERROR 266# ASSIGNMENT FROM MORE THAN ONE PARALLEL PATH.
DATA: D+091+NFLS+FREQUENCY+SCAN+DATA.

- * ERROR DETECTED AT AUD-NODE
- * PRECEDED BY RETURN
- * PRECEDED BY ALPHA: A+01+DME+INS+NOISE+GENERATION+ALPHA

- * PRECEDED BY ALPHA: A+03+GENERATE+INS+ALPHA
- * PRECEDED BY ALPHA: A+02+GENERATE+DME+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PRECEDED BY SUBNET: S+4+MODEL+NELS+PLATFORM+SUB
- * PRECEDED BY SUBNET: S+2+00+NELS+OPERATIONAL+CONTROL+SUB
- * PRECEDED BY RENET: RELEMANDLEENELSESENSOREANDEGPSEPROCESSINGERENET

*ERROR 2669 INFORMATIN ASSIGNED BUT MOT USED.

DATA: D+002+ASET+MSG+DEST+DATA

DATA: D+004+ASET+MSG+NA'E+DATA

DATA: D+005+ASET+MSG+SUURCE+DATA

DATA: D+135+SENSOR+ID+DATA.

****** ANALYZE DATA FLOW FOR PENET: REREMODELENELS+SENSOR+SYSTEM+RENET **ERROR 2648 BRANCH ITEM NOT CONTAINED IN RANGE LIST ON CONSIDER OR DATA: Decoupasetemsgenameedata

- * ERROR DETECTED AT UR-NUME DATA: D+004+ASET+MSG+NAMF+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+MELS+SENSOR
- * PRECEDED BY RENET: RE2+MODELENFLS+SENSORESYSTEMERENET
- *ERROR 264# BRANCH ITEM NOT CUNTAINED IN RANGE LIST ON CONSIDER OR DATA: D+004#ASET#MSG#NAME#DATA
 - * ERROR DETECTED AT DR-NORE DATA: D+004+ASET+MRG+NAME+PATA
 - * PRECEDED BY INPUT+INTERFACE: INTO+WELS+SENSUR
 - * PRECEDED BY RENET: REZEMBOSTENSESSESSORESYSTEMERENET
- *ERROR 2649 ALL ITEMS IN RANGE LIST NOT ENCOUNTERED ON BRANCHES DATA: 9+004+ASET+MSG+WAME+DATA
 - * ERROR OFTECTED AT OR-MODE DATA: D+004+4SET+MSG+NAME+DATA
 - * PRECEDED BY IMPUT+INTERFACE: INTO+NELS+SFNSOR
 - * PRECEDED BY RENET: REZEMBLE NELSES ENSORESYSTEMBURNET
- *ERROR 2661 INFURMATION ALWAYS HEASSIGNED BEFORE USED.
 - DATA: D+002+ASET+VSG+DEST+DATA
 - DATA: D+005+ASET+"SG+SDUFCE+DATA
 - DATA: 0+135+SENSOR+ID+DATA.
 - * ERROR DETECTED AT ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA
 - * PRECEDED BY ALPHA: A+04+INITIALIZE+NFLS+ALPHA
 - * PRECEDED BY OR-NUDE DATA: DEGGENAME PRATA
 - * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSUR
 - * PRECEDED BY RENET: REZEMODELENELSESENSORESYSTEMERENET
- *ERROR 2673 DESTROY ENTITY+CLASS THAT IS NOT SPLECTED.
 ENTITY+CLASS: EC+2+NELS+SCENAPIO+EC.
 - * ERROR DETECTED AT ALPHA: A+20+RESET+NELS+ALPHA
 - * PRECEDED BY DR-"ORE DATAL DEGULARETEMSGENAMEEDATA
 - * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR

* PRECEDED BY RENET: REZEMODEL+NELS+SENSOR+SYSTEM+P+NET

*ERROR 2673 DESTROY ENTITY+CLASS THAT IS NOT SFLECTED. ENTITY+CLASS: EC+3+NELS+TASMS+EC.

- * ERROR DETECTED AT ALPHA: A+24+RESET+NELS+ALPHA
- * PRECEDED BY OR-NODE DATA: D+004+ASFT+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENFLSESENSORESYSTEMERENET

*ERROR 2673 DESTROY ENTITY+CLASS THAT IS NOT SELECTED.

ENTITY+CLASS: EC+4+NELS+THREAT+EC.

- * ERROR DETECTED AT ALPHA: A+24+RESET+NELS+ALPHA
- * PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENELSESENSORESYSTEMEPENET

*ERROR 2673 DESTROY ENTITY+CLASS THAT IS NOT SELECTED.

ENTITY+CLASS: EC+5+NELS+VEHTCLE+CHARACTERISTICS+EC.

- * EPROR DETECTED AT ALPHA: A+24+PESET+NELS+ALPHA
- * PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENELSESENSORESYSTEMERENET

*ERROR 2673 DESTRUY ENTITY+CLASS THAT IS NOT SELECTED.

ENTITY+CLASS: EC+6+DETECTED+EMISSIONS+INFO+EC.

- * ERROR DETECTED AT ALPHA: A+24+RESET+NELS+ALPHA
- * PRECEDED BY OR-NOTE DATA: THOOGHASETHMSGHNAMEHDATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENELSESENSORESYSTEMERENET

*ERROR 2664 INFURMATION ALWAYS USER REFURE ASSIGNED.

ENTITY+CLASS: EC+1+NELS+OFTECTABLE+EMISSION+BREAKOUT+EC

ENTITY+CLASS: EC+2+NELS+SCENARIOFEC

ENTITY+CLASS: EC+4+NELS+THREAT+EC

ENTITY+CLASS: EC+5+MELS+VFHTCLE+CHARACTERISTICS+EC.

- * ERROR DETECTED AT SFLECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
- * PRECEPED BY SUBNET: SHI+CHECK+NELS+SENSOR+STATUS+SUB
- * PRECEDED RY AND-MOUF
- * PRECIDED BY OR-MODE DATA: N+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMBUFLENFLSESENSORESYSTEMERENET

*EPROR 2664 INFORMATION ALMAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+2+HELS+SCE! APIN+FC

FNTITY+CLASS: EC+4+NELS+THREAT+FC

ENTITY+CLASS: EC+5+NELS+VFHTCLE+CHARACTERISTICS+FC.

```
24-MAR-1983 18:14
  * ERROR DETECTED AT SELECT-NODE ENTITY+TYPE:
  ET+5+NELS+PRE+BRIEFFO+SOI+ET
  * PRECEDED BY SFLECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
  * PRECEDED BY SUBNET: S+1+CHECK+NELS+SENSOR+STATUS+SUB
  * PRECEDED BY AND-NODE
  * PRECEDED BY OR NODE
                          DATAL DEGOGERASETEMSGENAMEEDATA
  * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOP
  * PRECEDED BY RONET: ROZOMODELONELSOSENSOROSYSTEMORET
MERROR 2664 INFORMATION ALWAYS USED BEFORE ASSIGNED.
     ENTITY+CLASS: EC+2+NELS+SCEMARIN+FC
     ENTITY+CLASS: EC+4+YELS+THREAT+EC
     ENTITY+CLASS: EC+5+NELS+VFHICLE+CHARACTERISTICS+EC.
```

* ERROR DETECTED AT SELECT-MODE ENTITY+TYPE: ET+8+NELS+PPE+BRIEFED+AOI+ET

* PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+EPIFFED+SDI+ET

* PRECEDED BY SELFCT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET

* PRECEPED RY SUBNET: S+1+CHECK+NELS+SENSOR+STATUS+SUB

* PRECEDED BY AND*NODE

* PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA

* PRECEDED BY IMPUT+INTERFACE: INTO+NELS+SENSOR

* PRECEDED BY RENET: RESEMBLE NELSES ENSORESYSTEM FRENET

*ERROR 2675 DISJOINT INPUT MESSAGES REQUIRED AT THE SAME TIME. MESSAGE: M+02+NFLS+CARTO+UPCATES+MSG+IN.

* ERROR DETECTED AT ALPHA: A+25+HPDATE+CARTO+ALPHA

* PRECEDED BY OR-NODE DATA: DEDO4+ASET+MSG+NAME+DATA

* PRECEDED BY AND-NODE

* PRETENED BY OR-NODE DATA: C+004+ASET+MSG+NAME+DATA

* PRECEDED BY INPUT+INTERFACE: INTO+MELS+SENSOR

* PRECEDED BY RENET: REZEMODELENELSESENSORESYSTEMERENET

*ERROR 2664 INFORMATION ALWAYS USED BEFORE ASSIGNED. ENTITY+CLASS: EC+2+NELS+SCENARIO+FC
ENTITY+CLASS: EC+3+NELS+TASKS+EC
ENTITY+CLASS: EC+4+NELS+THREAT+FC
ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC. * ERROR DETECTED AT SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET * PRECEDED BY UR-NUDE DATA: C+004+ASET+MSG+NAMF+DATA * PRECEDED BY AND-NODE

* PRECEDED BY DR-NODE DATA: D+004+45FT+M5G+NAME+DATA

* PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR

* PRECEDED BY RENET: REZEMODELENELSESSINSORESYSTEMERENET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED. ENTITY+CLASS: EC+2+NELS+SCENARIO+FC FNTITY+CLASS: EC+3+NELS+TASKS+EC ENTITY+CLASS: EC+4+NELS+THREAT+EC ENTITY+CLASS: EC+5+NELS+VFHTCLF+CHARACTERISTICS+EC.

- * ERROR DETECTED AT SELECT-NUME ENTITY+TYPE:
- ET+8+NELS+PRE+BRIEFFU+ANI+ET
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
- * PRECEDED BY OR-NODE DATA: 0+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND*NODE
- * PRECEDED BY OP-NORE DATA: C+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENELSESSORESYSTEMERENET

*ERROR 2675 DISJOINT INPUT MESSAGES REQUIRED AT THE SAME TIME. MESSAGE: M+03+NFLS+COMMANDERS+REGUIREMENTS+MSG+IN.

- * ERROR DETECTED AT ALPHA:
- A+14+NELS+PROCESS+COMMANDERS+FERUIREMENTS+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+A0I+ET
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
- * PRECEDED BY DRENDE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND=NODE
- DATA: D+004+ASET+MSG+NAME+DATA * PRECEDED BY DR=NONE
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+R+NET

*ERROR 2664 INFORMATION ALWAYS USED REFURE ASSIGNED.

FNTITY+CLASS: EC+1+NELS+DETFCTABLE+EMISSION+BREAKOUT+EC

ENTITY+CLASS: EC+2+HELS+SCENARIO+FC ENTITY+CLASS: EC+4+NELS+THREAT+EC

ENTITY+CLASS: EC+5+NELS+VFHICLE+CHARACTERISTICS+EC.

- * ERROR DETECTED AT SFLECT-HODE ENTITY+TYPE:
- ET+4+NELS+FREQUENCY+SCAM+FT
- * PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND-NODE
- * PRECEDED BY OR-NODE DATA: 0+004+4SET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: HEZEMODELENELSESSORESYSTEMERENET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+1+NELS+DETFCT4BLE+EMISSION+BREAKOUT+EC

ENTITY+CLASS: EC+2+MELS+SCENARIO+EC

ENTITY+CLASS: EC+4+NELS+THREAT+FC

ENTITY+CLASS: EC+5+NELS+VEHICLE+CHARACTERISTICS+EC.

- * EPROR DETECTED AT SFLECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PRECEPED BY DR=NOPE DATA: C+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND-NODE
- * PRECEDED BY DR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED RY RENET: REZEMODELENELSESENSORESYSTEMERENET

*ERROR 2675 DISJOINT INPUT MESSAGES REQUIRED AT THE SAME TIME.

MESSAGF: M+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN

MESSAGE: M+02+NELS+CARTO+UPDATES+MSG+IN

MESSAGE: M+03+NFLS+COMMANDERS+REQUIREMENTS+MSG+IN

```
MESSAGE: M+04+NFLS+MODIFIED+TASK+MSG+IN
MESSAGE: M+06+NELS+OPPIT+MODIFICATIONS+MSG+IN
MESSAGE: M+08+NELS+PRIOPITIZED+SENSOR+DIRECTIONS+MSG+IN
MESSAGE: M+09+NFLS+REQUESTED+SENSOR+DATA+MSG+IN
MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN.
```

- * ERHOR DETECTED AT ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- DATA: C+004+ASET+MSG+NAME+PATA * PRECEDED BY OR-NODE
- * PRECEDED BY AND-NODE
- * PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RANET: RAZAMODELANELSASENSORASYSTEMARANET

*ERROR 2661 INFORMATION ALWAYS REASSIGNED BEFORE USED. DATA: 0+002+ASET+MSG+DEST+DATA DATA: D+005+ASET+MSG+SOURCE+DATA.

- * EPROR DETECTED AT ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
- * PRECEDED BY OR-HODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND-NODE
- * PRECEDED BY OR=NODE DATA: C+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY R+NET: R+2+MODEL+NELS+SEMSOR+SYSTEM+R+NET

*ERROR 2664 INFORMATION ALWAYS USED BEFORE ASSIGNED. DATA: D+141+TIME+DATA.

- * EPROR DETECTED AT ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
- * PRECEDED BY SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PRECEDED BY OR-NODE DATA: C+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND*NODE
- * PRECEDED BY OR-NODE DATA: C+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY R+NET: P+2+MODEL+NELS+SENSOR+SYSTEM+R+NET

*ERROR 2664 INFORMATION ALWAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+1+NELS+DFTECTABLE+EMISSION+BREAKOUT+EC

ENTITY+CLASS: EC+2+NELS+SCENARIC+EC ENTITY+CLASS: EC+4+NELS+THREAT+EC

FNTITY+CLASS: EC+5+NEIS+VFHICLE+CHAPACTERISTICS+EC.

- * ERROR DETFCTED AT SELECT-NODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PRECENED BY OR-NONE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND-NOUF
- * PRECENED BY OP-MONE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMODELENELSESSORESYSTEMERENET

*EPRCR 2668 INFORMATION ALWAYS USED REFORE ASSIGNED.

ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC

ENTITY+CLASS: EC+2+NELS+SCENARIO+EC

ENTITY+CLASS: EC+4+NELS+THREAT+EC

ENTITY+CLASS: EC+5+NELS+VFHTCLE+CHARACTERISTICS+LC.

- * ERROR DETECTED AT SFLECT-NOPE EMTITY-TYPE: ET+3+NELS+FLIGHT+ET
- * PRECEDED BY OR-NODE DATA: D+004+ASET+MSG+NAME+DATA
- * PRECEDED BY AND-NODE
- * PRECEDED BY OR-MODE DATA: 0+004+ASET+MSG+NAME+DATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RANET: RAZAMODELANFLSASENSORASYSTEMAPANET

*ERROR 2675 DISJOINT INPUT MESSAGES REQUIRED AT THE SAME TIME.

MESSAGE: M+09+NFLS+REQUESTEC+SENSOR+DATA+MSG+TN.

- * ERROR DETECTED AT ALPHA: A+16+NELS+PROCESS+REQUESTED+DATA+ALPHA
- * PRECEDED BY SELECT-MODE ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
- * PRECEDED BY DREMORE DATA: PHONHEASETHMSGENAMFEDATA
- * PRECEDED BY AND-NODE
- * PRECEDED BY OR-HODE DATA: C+004+4SET+MSG+NAME+DATA
- * PRECEDED BY INPUT-INTERFACE: INTO-NELS-SENSOR
- * PRECEDED BY RENET: REZEMONFLENFLSESENSORESYSTEMERENET

#ERROR 2665 POSSIBLE USE AND ASSIGNMENT FROM DIFFERENT PARALLEL PATHS.
DATA: D+135+SENSOP+10+DATA
ENTITY+CLASS: EC+1+NEIS+DFTECTABLE+EMISSION+BPEAKCUT+EC
ENTITY+CLASS: EC+3+NELS+TASKS+FC.

- * ERROR DETECTED AT AND-NODE
- * PRECEDED BY OR-MODE DATA: DEGOGEASETEMSGENAMEEDATA
- * PRECEDED BY INPUT+INTERFACE: INTO+NELS+SENSOR
- * PRECEDED BY RENET: REZEMBOFLENFLSESSORESYSTEMERENET

*ERROR 2667 USE AND ASSIGNMENT FROM DIFFERENT PARALLEL PATHS.
DATA: D+004+ASET+MSG+NAME+D4TA.

- # ERROR DETECTED AT AMD-NODE
- * PRECEDED BY OR-MODE DATA: C+004+4SET+MSG+NAMF+DATA
- * PRECEDED BY IMPUTATINTERFACE: INTOANELSASENSOR
- * PRECEDED BY RENET: REZEMODELENFLSESENSORESYSTEMERENET

*ERROR 2820 INFORMATION PASSING INPUT+INTERFACE NOT USED.

DATA: D+002+ASET+MSG+DEST+DATA

DATA: 0+005+ASET+MSG+SOURCE+DATA

DATA: D+029+CARTU+SECTION+NUM+DATA

DATA: D+030+CARTU+UPDATE+1+DATA

DATA: D+031+CARTO+UPDATE+2+DATA

DATA: 0+032+CARTO+UPOATE+3+CATA

DATA: D+035+CARTU+UPDATF+X+DATA
DATA: D+034+CART0+UPDATF+Y+FATA

DATA: DE034ECARTHEUPDATESYERATA
DATA: DE040EFIRSTECMURSERFUEUPDATESCATA

DATA: 0+048+GROUND+TAPGET+LCC+X+DATA

DATA: D+049+GPOUND+TARGET+LOC+Y+DATA

DATA: De063ea+NELS+EMISSION+START+TIME+DATA

DATA: D+064+4+NFLS+EMISSICN+STOP+TIME+DATA

DATA: D+073+A+NFLS+EMTTTER+FREUUENCY+RANDWIDTH+DATA

DATA: D+075+A+HFLS+EMITTER+IU+DATA

APPENDIX D

REVS-PRODUCED

B-5 SPECIFICATION DOCUMENT

```
RUNREVSE.LOGIS
                              21-MAR-1983 17:14
                                                             Page 3
   21MAR-83
M 13136:48
                      XX 000
                              REVS BASELINE VERSION # 14.1, (DATE=21MAR-83,
 X 15:54:38 REVSIN
                              RADX.
  15:54:39
                      XX 001
                              FUNCTION PADX ... INITIATED ...
                              FENC.
 X 17:14:09 REVSIN
 M 17:14:10
                              FUNCTION RADX
                                               COMPLETED.
                       XX 005
                              X 17114:10 REVSIN
M 17114115
M 17114115
                      XX 007
                       XX 007 YOUR NEW DATA BASE IS ON TAPEZ.DAT.....
XX 000 REVS BASELINE VERSION = 14.1, (DATE=21MAR=83, TIME=13:36:48)
        RADX.
OXX OF FUNCTION RADX
                        INITIATED.
 **** ENTER RADY, DATE = 21MAR-83, TIME = 15:56:20 ****
 [RADX COMMAND#
SET THE+INPUT+INTERFACES = INPUT+INTERFACE WITH TRACED.
SET COUNT # 1
 [RADY COMMAND=
 SET THE+OUTPUT+INTERFACES = OUTPUT+INTERFACE WITH TRACED.
SET COUNT # 1
 (RADY COMMAND=
SET THE+INTERFACES = THE+INPUT+INTERFACES OR
                THE+DUTPUT+INTERFACES.
SET COUNT = 2
 TRADY COMMANDE
 SET THE+ORTGINATING+REQUIREMENTS = ORIGINATING+REQUIREMENT
                                 WITH TRACES.
SET COUNT # 28
 [RADX COMMAND=
SET THE + DECISIONS = DECISION WITH TRACES.
SET COUNT # 3
 IRADY COMMANDS
SET THE * MESSAGES # MESSAGE WITH TRACED.
SET COUNT # 15
 TRADX COMMANDS
SET THE+DATA = DATA WITH TRACED.
 SET COUNT # 181
 TRADX COMMANDS
SET THE + FILES . FILE WITH TRACED.
SET COUNT = 22
 TRADY COMMANDS
```

SET THE+ALPHAS = ALPHA WITH TRACED.

RUNREVS8.LOG;6	21-MAR-1983 17:14	Page 4
SET COUNT = 25		
(RADX COMMANDS		
SET THE-ENTITY-CLASSES =	ENTITY+CLASS WITH TRACED.	
FRADY COMMANDS		

```
AND DYNAMICS (SPEED & ACCELERATION) WILL BE GIVEN AT-
    KEY POINTS ALONG THE MISSICH FLIGHT PATH".
    ENTERED+BY: "SGM".
    TRACES TO:
        ALPHA:
               A+02+GENERATE+DME+ALPHA
        DATAS
               D+014+ASP+LOC+X+DATA
        DATA:
               D+015+ASP+LOC+Y+DATA -----
        DATA:
               D+016+ASP+LOC+Z+DATA
               D+020+ASP+STATE+VECTOR+DATA
        DATAS
        DATAL
               De021eASPeTIME+DATA
        DATA:
               D+022+ASP+VEL+X+DATA
        DATAS
               D+023+ASP+VEL+Y+DATA
        DATA:
              D+024+ASP+VEL+Z+DATA
        SUBNET: S+4+MODEL+NELS+PLATFORM+SUR.
    DOCUMENTED BY:
        SOURCE: ASE+PP+6+3+1+1.
ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+INS.
    DATE+ENTERED: 72481.
    DESCRIPTION:
             "CARTESIAN-TO-GEOGRAPHICAL CONVERSION
    IS TO BE APPLIED TO THE DME VALUES TO OBTAIN THE
    x, Y, Z, OF THE PLATFORM; WITH ROLL, PITCH, AND YAW
    MODELLED USING VECTOR RESULTANTS OF CENTRIPETAL AND
    GRAVITATIONAL FORCES.
    ENTERED+BY: "SGM".
    TRACES TO:
        ALPHA: A+03+GENERATE+INS+ALPHA
        DATAL
               D+010+ASP+ALTITUDE+DATA
        DATA: D+011+ASP+ATTITUDE+DATA
        DATA: D+012+ASP+LATITUDE+DATA .....
        DATA: D+013+ASP+LOCATION+DATA
        DATA: D+017+ASP+LONGITUDE+DATA
        DATA: D+018+ASP+PITCH+DATA _____
        DATA: D+019+ASP+ROLL+DATA
        DATA: D+025+ASP+YAW+DATA
        SUBNET: S+4+MODEL+NELS+PLATFORM+SUB.
    DOCUMENTED BY:
        SOUPCE: ASE+PP+6+3+1+1.
ORIGINATING+REQUIREMENT: ORIG+RER+GENERATE+NOISE.
    DATE+ENTERED: 72481.
    DESCRIPTION:
             "ERRORS IN THE SENSOR PLATFORM DME
    IS ASSUMEND TO BE GAUSSIAN DISTRIBUTED WITH A MEAN
    CONSTANT, AND THE INS MEASUREMENTS ARE ASSUMED TO BE
    ZERO MEAN GAUSSIAN DISTRIBLTED".
    ENTERED+BY: "SGM".
    TRACES TO:
         ALPHA: A+01+DMF+INS+NOTSE+GENERATION+ALPHA
         SUBNET: S+4+MONEL+NELS+PLATFORM+SUR.
    DOCUMENTED BY:
         SOURCE: ASE+PP+6+3+1+1.
OFIGINATING+REQUIREMENT: OFIG+RED+GENERATE+PLATFORM+MEASUREMENTS...
    TRACES TO:
         ALPHA: A+02+GENERATE+DME+ALPHA
```

DATA: D+006+ASP+ACCELERATION+DATA

```
DATA: D+007+ASP+ACC+X+DATA
      D+008+ASP+ACC+Y+DATA
DATAS
DATAL
      D+009+ASP+ACC+Z+DATA
DATAS
      D+041+FLIGHT+WAYPOINT+X+DATA
DATAL
      P+042+FLIGHT+WAYPOINT+Y+DATA
      D+043+FLIGHT+WAYPOINT+Z+DATA
DATAL
ENTITY+CLASS: FC+3+NELS+TASKS+EC
ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
FILE: F+06+FLIGHT+PROFILE+FILE
FILES
      F+27+PLATFORM+CONTROL+FILE
SUBNET: S+4+MODEL+NELS+PLATFORM+SUB.
```

ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.

DATE+ENTERED: 72781,
DESCRIPTION:

"THE EMISSIONS WHICH MEET AND DETECTION CRITERIA ARE PLACED ON A NELS CANDIDATE TARGET LIST; THE ADI FILTER REMOVES FROM THAT LIST THOSE EMISSIONS WHICH ARE LOCATED OUTSIDE OFTHE ASE PRE+BRIEFED AREA OF INTEREST".

FNTEREDORY: "SGM".
TRACES TO:

ALPHA: A+05+NELS+APEA+OF+INTEREST+FILTER+ALPHA DATAS D+061+NELS+EMISSION+DURATION+DATA DATAL D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA DATAS D+094+NELS+PRE+BRIEFED+A0I+DATA DATAS D+095+NELS+PRE+BRIEFFD+ADI+FILTERING+CRITERIA+DATA DATAL D+096+NELS+PRE+BRIEFED+A0I+LOWER+LFFT+DATA D+097+NELS+PPE+BPIEFED+ACI+LOWER+LEFT+X+DATA DATAS D+098+NET S+PRE+BRIEFED+ADI+LOWER+LFFT+Y+DATA DATAL DATAS D+099+NELS+PRE+BRIEFED+A0I+UPPER+RIGHT+DATA D+100+NELS+PFE+BRIEFED+A01+UPPER+RTGHT+X+DATA DATAL P+101+NELS+PRE+BRIEFED+A0I+UPPER+RIGHT+Y+UATA DATAL DATAL P+147+NELS+EMISSION+DURATION+DATA DATA: P+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA D+157+NELS+EMISSION+DURATION+DATA ENTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSION+RREAKOUT+EC ENTITY+CLASSI FC+3+NELS+TASKS+FC ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+AGI+ET FILER F+10+NELS+CANDIDATE+TARGETS+FILE FILE: F+20+NELS+PRF+BRIEFEP+ADI+FILE SUBNET: S+5+MODEL+NELS+SENSOR+SUR.

DOCUMENTED BY: SOURCE: ASE+PP+6+3+2+2.

ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+COARSE+AND+FINE+LOCATION.
PATE+ENTERED: 72781.
DESCRIPTION:

"BY USE OF TOOA AND DO MEASUREMENTS THE COARSE LOCATION FUNCTION DETERMINES THE APPROXIMATE LOCATION OF ACTIVE NARROWBAND EMITTERS, AND THE FINE LOCATION FUNCTION CLACULATES LOCATION BY USING THE CEP THRESHOLD OR UNTIL THE TRANSMISSION ENDS".

ENTERLO+RY: "SGM".

TRACES TO:

ALPHA: A+06+NELS+COARSE+LOCATION+ALPHA ALPHA: A+07+NELS+FINE+LOCATION+ALPHA DATA: D+070+NELS+EMITTER+COV+DATA

```
ENTITY+TYPE: ET+12+DETECTED+EMISSIONS+COARSE+ET
ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+_T
SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR,
DOCUMENTED BY:
SOURCE: ASE+PP+6+3+2+3.
```

ORIGINATING+REQUIREMENT: ORIG+RED+NELS+EMITTER+DEFAULT.
DATE+ENTERED: 72781.
DESCRIPTION:

"WHEN NO PRE-BRIEFED SIGNAL OF INTEREST IS AVAILABLE TO THE NELS FROM THE ASE ELEMENT, THEN ALL EMITTERS TRANSMITTING ON A FPEQUENCY WITHIN THE RECEIVER PASSRAND ARE FORWARDED TO THE AREA OF INTEREST FILTER".

ENTERED+BY: "SGM".

TRACES TO:

ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
ENTITY+TYPE: ET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET
ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET
SUBNET: S+5+MODEL+NELS+SENSOR+SUB.

DOCUMENTED BY: SOURCE: ASE+PP+6+3+2+2.

ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EYTERNAL+INTERFACE.

DATE+ENTERED: 72781.

DESCRIPTION:

"INTERFACES WITH SCENARIO GENERATION SUBSYSTEM AND THE ASE ELFMENT AND SENSOR TASKING AND CUES; CONTROLS SENSOR PLATFORM MANAGEMENT, FREQUENCY SCAN ALLOCATION, TARGET ACRUISITION EMITTER LOCATION, ACTIVITY INFORMATION, AND SENSOR STATUS ARE FORWARDED TO THE ASE ELEMENT VIA AN EXTERNAL INTERFACE".

ENTERED+BY: "SGM".

TRACES TO:

ALPHA: A+04+INITIALIZE+NELS+ALPHA
ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA
ALPHA: A+10+NELS+MODIFY+ORRIT+ALPHA
ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
ALPHA: A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA
ALPHA: A+14+NELS+PRUCESS+COMMANDERS+REQUIREMENTS+ALPHA
ALPHA: A+14+NELS+PRUCESS+COMMANDERS+REQUIRECTIONS+ALPHA
ALPHA: A+16+NELS+PROCESS+REQUESTED+DATA+ALPHA
ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA
ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA
ALPHA: A+25+UPDATE+CARTO+ALPHA

DATA: D+029+CARTO+SECTION+NUM+DATA
DATA: D+030+CARTO+UPDATE+1+DATA

DATA: D+031+CARTO+UPDATE+2+DATA
DATA: D+032+CARTO+UPDATE+3+DATA

DATA: De033+CARTO+UPDATE+X+DATA
DATA: D+034+CARTO+UPDATE+Y+DATA

DATA: D+046+GROUND+TARGET+FREQUENCY+DATA
DATA: D+047+GROUND+TARGET+LENGTH+DATA

DATA: DecaseGroundetargeteloceyedata
DATA: DecaseGroundetargeteloceyedata

DATA: D+050+GROUND+TARGET+VELOCITY+DATA

DATA: Deno6-NELS-EMITTER-ACTIVITY-GROUND-TRUTH-DATA

DATAL DEGOTENELS-EMITTER-BANDWIDTH-DATA

```
DATAS
            D+069+NEL 8+EMITTER+CHARACTERISTICS+DATA
    DATAL
            D+077+A+NELS+EMITTER+MODULATION+TYPE+DATA
    DATAS
            D+077+NELS+EMITTER+MODULATION+TYPE+DATA
    DATAL
            D+078+A+NELS+EMITTER+POWER+LEVEL+DATA
    DATAL
            D+078+NEL8+EMITTER+POWER+LEVEL+DATA
            D+114+PLATFORM+LOCATION+X+DATA
    DATAL
    DATAL
            D+115+PLATFORM+LOCATION+Y+DATA
            D+116+PLATFORM+LOCATION+Z+DATA
    DATAL
            D+117+PLATFORM+MOD+X+DATA
    DATA:
            D+118+PLATFORM+MOD+Y+DATA
    DATAS
    DATA:
            D+119+PLATFORM+MOD+Z+DATA
    DATAL
            D+136+SENSOR+MCDE+OF+OPERATION+DATA
    DATA:
            D+142+TRACK+MESSAGE+DATA
    DATAI
            D+176+NELS+EMITTER+BANDWIDTH+DATA
            P+178+NELS+EMITTER+MODULATION+TYPE+DATA
    CHTAR
            D+181+NELS+EMITTER+MODULATION+TYPE+DATA
    DATAS
    DATAS
            D+182+NEL S+EMITTER+BANDWIDTH+DATA
    ENTITY+CLASS: EC+2+NELS+SCENARIO+EC
     ENTITY+CLASS:
                    EC+5+NELS+VEHICLE+CHARACTERISTICS+EC
    ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+FT
    ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERISTICS+ET
    EVENT: E+1+ACTIVATE+SENSOR+EVENT
    FILE:
            F+02+CARTO+UPDATE+FILE
    FILES
           F+04+CMDRS+DATA+TO+UPDATE+FILE
    FILE:
            F+07+GROUP+TARGET+LOCS+FILE
    FILE
            F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
    FILE:
            F+15+NELS+EMITTER+CHARACTERISTICS+FILE
    FILE:
            F+32+SENSOR+ORBIT+MODS+FILE
            F+33+SENSOR+PLATFORM+LOCATION+FILE
    FILE:
            F+34+SENSOR+STATUS+FILE
    FILE
     INPUT+INTERFACE: INTO+NELS+SENSOR
     MFSSAGEI
               M+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN
    MESSAGET
               M+02+NELS+CARTO+UPDATES+MSG+IN
     MESSAGE:
               M+03+NELS+COMMANDERS+PEQUIREMENTS+MSG+IN
     MFSSAGE
               M+04+NELS+MCDIFIED+TASK+MSG+IN
     MESSAGET
               M+05+NELS+NCN+SURVEILLANCE+TARGET+REPORTS+MSG+0UT
     MESSAGET
               M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN
     MESSAGE
               M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT
     MESSAGE
               M+08+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN
     MESSAGE
               M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN
     MESSAGE:
               M+10+NELS+SENSOR+REQUESTS+MSG+OUT
     MESSAGE!
               M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT
     MESSAGEI
               M+12+NELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT
     MESSAGE:
               M+13+NELS+T45KING+RESPONSES+MSG+OUT
     MESSAGE
               M+14+NELS+TPACK+MESSAGE+MSG+OUT
     QUIPUT+INTERFACE: TO+TIMING+AND+CUNTPOL+FROM+NELS
             R+1+HANDLE+NELS+SENSOP+AND+GPS+PROCESSING+R+NET
     R+NET:
     R+NET:
             R+2+MODFL+NFLS+SENSOR+SYSTEM+R+NET
     SUBNET:
              S+1+CHECK+NELS+SENSOR+STATUS+SUB
     SUBNETE
              S+2+DO+NELS+CPERATIONAL+CONTROL+SUB.
DOCUMENTED BY:
     SOURCE: ASE+PP+6+3+2+3.
```

ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SCAN+OPTIMIZATION.
DATE+ENTERED: 72781.
DESCRIPTION:

"AUTOMATICALLY OPTIMIZES FREQUENCY
SCAN STRATEGY BASED ON THE DETECTION OF HIGH PRIORITY

```
THREAT EMITTERS".
        ENTEREDORY: "SGM".
        TRACES TO:
             ALPHA: A+OR+NELS+FREGUENCY+SCAN+OPTIMIZATION+ALPHA
             SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR.
        DOCUMENTED BY:
             SOURCE: ASE+PP+6+3+2+3.
   ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SENSOR+DIRECTOR.
        DATE+ENTERED: 72481.
        DESCRIPTION:
             "THE NELS GPS WILL DIRECT THE NELS AIRBORNE
 SENSOR RECEIVERS TO TUNE TO A SPECIFIC FREQUENCY BANDS.
        ENTERED+BY: "SGM".
        TRACES TO:
                   D+091+NELS+FREQUENCY+SCAN+DATA.
             DATAL
        DOCUMENTED BY:
             SOURCE: ASE+PP+6+3+2+2.
   CRIGINATING+REQUIREMENT: ORIG+REG+NELS+SIGNAL+OF+INTEREST.
        DATE+ENTERED: 72481.
        DESCRIPTION:
             "A SET OF FREQUENCY-SCAN RANGE DESCRIPTORS
ARE TO BE STORED IN THE NELS GPS, EITH EACH DESCRIPTOR
DEFINING A BEGINNING AND END OF A FREQUENCY RAND TO BE
SCANNEO"
        ENTEREDORY: "SGM".
        TRACES TO:
            ALPHA:
                   A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
            DATAL
                  D+090+NELS+FREGUENCY+SCAN+BAND+DATA
            DATAS
                   D+092+NELS+FRED+SCAN+LOWER+FRED+DATA
            DATAL
                   D+093+NELS+FREG+SCAN+UPPER+FREG+DATA
            DATAS
                   D+102+NELS+PRE+BRIEFED+SOI+DATA
            DATAS
                   0+103+NELS+PRE+BRIEFED+SOI+END+FREG+DATA
            DATA:
                   D+104+NELS+PRE+BRIEFED+SOI+FREQ+DATA
            DATAL
                   D+105+NELS+PRE+BRIEFED+SOI+MODULATION+TYPE+DATA
            DATAL
                   D+106+NELS+PRE+BRIEFED+SOI+START+FREG+DATA
            ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC
            ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+ET
            ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
            FILE: F+19+NELS+FREQUENCY+SCAN+FILE
            FILE: F+21+NELS+PRE+BRIEFED+SOI+FILE
            SUBNET: S+5+MODEL+NELS+SENSOR+SUB.
       DOCUMENTED BY:
            SOURCE: ASE+PP+6+3+2+2.
  ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNAL+TO+NOISE.
       DATE+ENTERED: 72781.
       DESCRIPTION:
            TREMOVE FROM NELS ADI CANDIDATE LIST ANY
EMITTER WHOSE SAN DOES NOT EXCEED A PRE-SET THRESHOLD
FOR AT LEAST TWO NELS SENSOR RECEIVERS.
       ENTERED+RY: "SGM".
       TRACES TO:
            ALPHAI
                   A+19+NELS+SIGNAL+TO+NOISE+DETECTABILITY+ALPHA
            DATAL
                  D+001+ALTITUDE+WEATHER+LOC+DATA
            DATAS
                  D+037+CLOUD+COVER+DATA
            DATAS
                  D+038+CONDITIONS+AT+ELEVATION+WEATHER+DATA
```

```
DATA: D+039+ELEVATION+WEATHER+DATA
                        DATA: 0+120+PRECIPITATION+DATA
                        DATA: D+144+X+WEATHER+LOC+DATA
                        DATA: D+146+Y+WEATHER+LOC+DATA
                        ENTITY+CLASS: EC+2+NFLS+SCENARIO+EC
                        ENTITY+CLASS: EC+3+NELS+TASKS+EC
                        FILE: F+26+NELS+WEATHER+CONDITIONS+FILE
SUBNET: SARAMORE AND TO THE SUBNET SUBNET SARAMORE AND TO THE SUBNET SARAMORE AND THE SUBNET SARAMORE AND THE SUBNET SARAMORE AND THE SUBNET SARAMORE AND THE SUBNET SARAMORE SARAM
                        SUBNET: S+5+MODEL+NELS+SENSOR+SUB.
               DOCUMENTED MY:
                        SOUPCE: ASE+PP+6+3+2+2.
     ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+SIGNATUPE+ANALYSIS.
               DATE+ENTERED: 72781.
               DESCRIPTION:
                         "TRANSFORMS LOCATION AND PARAMETER ESTIMATES......
INTO TYPED EMITTER REPORTS, EMITTER PARAMETER ESTIMATES,
AND TYPED EMITTER TARGET REPORTS: A TRAFFIC TYPE CODE
IS GIVEN TO EACH EMISSION BASED ON ITS SIGNAL CHARS......
               ENTERED+RY: "SGM".
               TRACES TO:
                         ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA
                         DATA: D+113+NELS+TYPED+EMITTER+REPORT+DATA
                        FILE:
                                    F+25+NELS+TYPED+EMITTER+REPORT+FILE
                         SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB.
               DOCUMENTED BY:
                        SOURCE: ASE+PP+5+3+2+3.
     ORIGINATING+REQUIREMENT: ORIG+RED+NELS+TARGET+ACQUISITION.
               DATE+ENTERED: 72781.
               DESCRIPTION:
                         "ESTIMATE EMITTER SIGNAL CHARACTERISTICS,
TIME DIFFERENCE OF APRIVAL, AND DIFFERENTIAL DOPPLER
INFORMATION FOR EACH DETECTABLE EMISSIONM.
               ENTERED+BY: "SGM".
               TRACES TO:
                        ALPHA: A+21+NELS+TARGET+ACQUISITION+ALPHA
                        DATA: 0+058+NELS+DD+1+2+DATA
                        DATA: D+059+NELS+DP+1+3+DATA
                        DATA: D+060+NELS+DD+2+3+DATA
                        DATA: D+088+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA
                        DATA: D+089+NELS+ESTIMATED+GPOUND+TRUTH+DATA
                        DATA: D+109+NELS+TDOA+1+2+DATA
                        DATA: D+110+NELS+TDOA+1+3+DATA
                        DATA: D+111+NELS+TDOA+2+3+DATA
                        DATA: D+112+HELS+TDQA+DD+DATA
                        ENTITY+TYPE: ET+11+DETECTED+EMISSIONS+DD+TDOA+ET
                        FILE: F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                        FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
                        FILE: F+24+NELS+TDOA+DO+FILE
                        SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB.
               POCUMENTED BY:
                        SOURCE: ASE+PP+6+3+2+3.
     ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+TERRAIN+SHADOWING.
               DATE+ENTERED: 72781.
               DESCRIPTION:
                         "ELIMINATE EMITERS WITHIN NELS ADI CANDIDATE
```

LIST WHICH CANNOT RE DETECTED BY THE SENSOR DUE TO TERRAIN OR FOLIAGE SHADOWING (SHADOWING DETERMINED BY AT LEAST TWO NELS PLATFORMS); INPUT TO THE SHADOWING ALGORITHM IS TO BE NELS PLATFORM LOCATION, EMITTER TARGET LOCATION, AND HYPSOGRAPHIC DATA BASE".

ENTERED+BY: "SGM".

TRACES TO:

ALPHA: A+22+NELS+TFRRAIN+FOLIAGE+SHADOWING+ALPHA SUBNET: S+5+MODEL+NELS+SENSUR+SUB.

DOCUMENTED BY:

SOURCE: ASE+PP+6+3+2+2.

ORIGINATING+REQUIREMENT: ORIGHER-NELS+THREAT+TABLE+UPDATE.
DATE+ENTEREO: 72781.

DESCRIPTION:

"MAINTAIN A TABLE SEGMENTED AND ORDFRED BY LOCATION, FREQUENCY, AND TIME OF LOCATION; EACH ENTRY WILL CONSIST OF THE DATA TYPES: EMITTER ID, FREQUENCY, LOCATION, TOC, CEP, HANDWIDTH, MODULATION, AND TRAFFIC TYPE".

FNTEPED+RY: "SGM".

TRACES TO:

ALPHA: A+234NELS+TPREAT+TABLE+UPDATE+ALPHA DATA: P+065+NELS+EMISSION+THREAT+TABLE+DATA DATA: DenoseNEL SEEMITTER+CFP+DATA DATAS D+079+NELS+EMITTER+TIME+OF+LOCATION+DATA DATA: D+080+NELS+EMITTER+TRAFFIC+TYPE+DATA DATA: DE177+NEL SEEMITTER+CEP+DATA DATA: D+179+NEL S+EMITTER+TIME+OF+LOCATION+DATA DATA: D+180+NELS+EMITTER+TRAFFIC+TYPF+DATA DATA: D+183+NELS+EMITTER+CFP+DATA ENTITY+CLASS: FC+4+NFLS+THREAT+EC ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET FILE: F+10+NFLS+CANDIDATE+TARGETS+FILE FILE: F+13+NELS+EMISSION+THREAT+TARLE+FILE

SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB.

DOCUMENTED BY:

SOURCE: ASE+PP+6+3+2+3.

ORIGINATING+REQUIREMENT: OPIG+RED+PRODUCE+SCENARIO.

DATE+ENTFRED: 72481.

DESCRIPTION:

"SCENARIOS SHALL BE INITIALIZED PRIOR TO EXECUTION FOR FILLING IN THE DATA STRUCTURES OF THE WORLD MODEL AND CREATING A SET OF INITIAL ORDERS SPECIFYING EVENT PROCEDURES TO BE EXECUTED DURING THE SCENARIO".

ENTEREDORY: "SGH".

TRACES TO:

DATA: D+072+NELS+EMITTER+DYNAMICS+DATA

DATA: D+073+4+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA

DATA: D+073+B+NELS+EMITTER+FREGUENCY+BANDWIDTH+DATA

DATA: D+073-NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA

DATAL D+075+A+NELS+EMITTER+ID+DATA

DATA: D+075+B+NELS+EMITTER+ID+DATA

DATA: D+075+NELS+EMITTER+ID+DATA

DATA: D+076+NEI S+EMITTER+LOCATION+DATA

DATA: D+081+A+NELS+EMITTER+TRANSMISSTON+FREGUENCY+DATA

```
DATAS
                 D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          DATA:
                 D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          DATAL
                 D+082+A+NELS+EMITTER+VEL+X+DATA
                 D+082+NELS+EMITTFR+VEL+X+DATA
          DATAS
          DATAL
                 D+083+4+NELS+EMITTER+VEL+Y+DATA
          DATAS
                 D+083+NELS+EMITTER+VFL+Y+DATA
          DATAL
                 D+084+A+NELS+EMITTER+VEL+Z+DATA
                 D+084+NELS+EMITTER+VEL+Z+DATA
          DATAS
                 D+085+A+NELS+EMITTER+X+DATA
          DATAS
                 D+085+B+NELS+EMITTER+X+DATA
          DATAL
                 D+085+NEL S+EMITTER+X+DATA
          DATAS
          DATAL
                 D+086+A+NELS+EMITTER+Y+DATA
          DATAL
                 D+086+B+NELS+EMITTER+Y+DATA
          DATAS
                 D+086+NELS+EMITTER+Y+DATA
                 D+087+A+NELS+EMITTER+Z+DATA
          DATAS
          DATAS
                 D+087+B+NELS+EMITTER+Z+DATA
          DATAL
                 D+087+NELS+EMITTER+Z+DATA
          DATAL
                 D+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
                 D+151+NELS+EMITTER+ID+DATA
          DATAS
                 D+152+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
          DATA:
                 D+153+NELS+EMITTER+X+DATA
          DATAL
          DATAL
                 D+154+NELS+EMITTER+Y+DATA
                 D+155+NELS+EMITTER+Z+DATA
          DATAS
                 D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
          DATA:
                 D+160+NELS+EMITTER+ID+DATA
          DATAS
          DATAS
                 0+161+NEI SEEMITTERETRANSMISSION-FREGHENCY+DATA
          DATAS
                 D+162+NELS+EMITTER+X+DATA
          DATAL
                D+163+NELS+EMITTER+Y+DATA
          DATAL
                 D+164+NELS+EMITTER+Z+DATA
          DATA:
                 D+166+NELS+EMITTER+ID+DATA
          DATAS
                 D+167+NELS+EHITTER+X+DATA
          DATA:
                 C+168+NEL S+EMITTER+Y+DATA
          DATA:
                 D+169+NELS+EMITTER+Z+DATA
          DATAL
                 D+171+NELS+EMITTER+ID+DATA
          DATAL
                 D+172+NELS+EMITTER+TRANSMISSION+FREGUENCY+DATA
          DATAR
                 D+173+NELS+EMITTER+X+DATA
          DATAS
                 D+174+NELS+EMITTER+Y+DATA
          DATA:
                 D+175+NELS+EMITTER+Z+DATA.
     DOCUMENTED BY:
          SOURCE: ASE+PP+6+2+1.
ORIGINATING+REQUIREMENT: ORIG+RED+SCENARIO+GENERATION.
     DATE+ENTERED: 72481,
     DESCRIPTION:
               "THERE SHALL BE THE ABILITY TO SIMULATE MATTLE
    FIELD CONDITIONS (IN THE FORM OF SCENARIOS) BASED UPON
    INITIAL ORDERS, INITIAL CONDITIONS FOR THE ENVIRONMENT,
    AND SETS OF COMMANDS PEFINING REALISTIC UNIT REACTIONSM.
     ENTERED+RY: "SGM".
     TRACES TO:
                 D+130+A+SCENARIO+GEN+ID+NUM+DATA
          DATAR
          DATAL
                 D+130+B+SCENARIO+GEN+ID+NUM+DATA
          OATAL
                 D+130+SCENARIO+GEN+ID+NUM+DATA
          DATAS
                 D+156+SCENARIO+GEN+ID+NUM+DATA
          DATAS
                 P+165+SCENARIO+GEN+ID+NUM+DATA
                 D+170+SCENARIO+GEN+ID+NUM+DATA.
          DATAL
     DOCUMENTED BY:
          SOURCE: 4SE+PP+6+2+1.
```

ORIGINATING+REQUIREMENT: ORIG+REG+SCENARIO+TIMING. DATE+ENTERED: 72481. DESCRIPTION: "ALL INITIAL ORDERS FOR THE SCENARIOS SHALL HAVE AN ASSOCIATED TIME FOR EXECUTION TO ALLOW THEM TO BE INSERTED INTO A TIME-ORDERED SCHEDULE". ENTERED+BY: "SGM". TRACES TO: D+063+A+NELS+EMISSION+START+TIME+DATA DATAS D+063+B+NELS+EMISSION+START+TIME+DATA DATAL D+063+NELS+EMISSION+START+TIME+DATA DATAS D+064+A+NELS+EMISSION+STOP+TIME+DATA DATAL DATA: D+064+NELS+EMISSION+STOP+TIME+DATA D+071+NELS+EMITTER+DATA DATAL D+149+NELS+EMISSION+START+TIME+DATA DATAL D+158+NELS+EMISSION+START+TIME+DATA DATAL FILE: F+16+NELS+EMITTER+FILE.

SOURCE: ASE+PP+6+2+1.

DRIGINATING+REQUIREMENT: ORIG+REQ+SENSOR+ACTIVITY+FLEMENTS.

TRACES TO:

DATA: 0+044+FREQUENCY+SCAN+PARAMETER+DATA

DATA: D+117+PLATFORM+MOD+X+DATA

DATA: 0+118+PLATFORM+MOD+Y+DATA

DATA: D+119+PLATFORM+MOD+Z+DATA

FILE: F+32+SENSOR+ORPIT+MODS+FILE

MESSAGE: M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN.

ORIGINATING+REQUIREMENT: ORIG+REQ+SENSOR+FEASIBILITY.
DATE+ENTERED: 72481.

DESCRIPTION:

DOCUMENTED BY:

"DETERMINE THE FEASIBILITY OF SENSOR RESPONDING TO A TASK VIA THE SENSOR ACTIVITY FILE, TERRAIN SHADOWING INFORMATION, SENSOR FIELD OF VIEW, AND POSSIBLE SENSOR SCANNING FREQUENCIES", ENTERED+BY: "SGM", TRACES TO:

DATA: D+143+X+LOC+FEASIBLE+DATA
DATA: D+145+Y+LOC+FEASIBLE+DATA
FILE: F+05+FEASIRLE+ACTIVITY+AREA+FILE.
DOCUMENTED BY:
SOURCE: ASF+PP+6+1+6.

ORIGINATING+REQUIREMENT: ORIG+REQ+TARGET+ID+CROSS+REFERENCE.
TRACES TO:
DATA: D+135+SENSOR+ID+DATA.

ORIGINATING+REQUIREMENT: OPIG+REG+TC+CYCLE+START.
DATE+ENTERED: 72781.

DESCRIPTION:

"THE T & C CYCLE SHALL START NEXT CYCLE

AFTER RECEIVING MESSAGES FROM ALL PROCESSORS THAT THE
SIMULATION IS COMPLETE FOR THAT CYCLE. IF THE T & C
CLOCK RUNS OUT BEFORE ALL PROCESSING IS COMPLETE, THE
T R C SHALL HAVE THE OPTION OF SENDING A STOP CYCLE
MESSAGE TO THE ASE".

```
ENTERED+BY: "SGM".
       TRACES TO:
            ALPHA: A+24+RESET+NELS+ALPHA
            DATA: D+141+TIME+DATA
            MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN.
       DOCUMENTED BY:
            SOURCE: ASE+PP+6+5+2.
  OPIGINATING+REQUIREMENT: OPIG+REQ+TC+MESSAGES+TO+CONTROL+AND+DISPLAY
       DATE+ENTERED: 72781.
       DESCRIPTION:
                 "THE MESSAGE FILTER FUNCTION SHALL SEND A
       COPY OF ALL MESSAGES THAT MEET SPECIFIED CPITERION (AS
       YET UNDEFINED) TO THE CONTROL AND DISPLAY FUNCTION".
       ENTERED+BY: "SGM".
       TRACES TO:
            DATA: D+140+TBD+DATA.
       DOCUMENTED BY:
            SOURCE: ASE+PP+6+5+1.
  ORIGINATING+REQUIREMENT: ORIG+REG+TC+OPERATOR,
       DATE+ENTERED: 72781.
       DESCRIPTION:
                 "THE T & C OPERATOR SHALL BE ABLE TO START
       ALL ASET PROCESSORS BY THE EXECUTION OF A SINGLE
       COMMAND".
       ENTERED+BY: "SGM".
       TRACES TO:
            DATA: D+140+TBD+DATA.
       DOCUMENTED BY:
            SOURCE: ASE+PP+6+5+2.
  ORIGINATING+REQUIREMENT: ORIG+REQ+IC+SYNC.
       DATE+ENTERED: 72761.
       DESCRIPTION:
                 "THE T & C SYNCHRONIZATION PROCESS
       SHALL ISSUE A MESSAGE TO EACH FUNCTIONAL PROCESSOR
       GIVING IT THE CURRENT PSEUCO-TIME (FROM COMMON SYSTEM
       CLOCK) AND AN INDICATION TO START PROCESSING A SIMULATION
       CYCLE.
               IT WILL ALSO START ITS OWN CLOCK COUNTING LENGHT
       OF REAL-TIME FOR A SIMULATION CYCLE".
       ENTERED+RY: "SGM".
       TRACES TO:
            DATA: D+141+TIME+DATA.
       DOCUMENTED BY:
            SOURCE: ASE+PP+6+5+2.
TRADY COMMANDS
               LIST THE+DECISIONS.
DECISION: CONTENTS+OF+MESSAGE.
       ALTERNATIVESE
                  "DOES THE MINIMUM REQUIREMENTS FOR A MESSAGE ALLOW
THE MESSAGE TO PERFORM SPECIFIC FUNCTIONS OR NOT".
       CHOICE:
             "THE MINIMUM REQUIREMENTS DO NOT ALLOW THE MESSAGE TO
```

```
PERFORM ITS SPECIFIC TASK".
```

DESCRIPTION:

"THE MINIMUM REQUIREMENTS ARE INCLUDED IN A MESSAGE THE RELIEVED THE RELIEVED IN ORDER TO PERFORM ANY NECESSARY FUNCTIONS. - THE RELIEVED ----MINIMUM MAY NOT ACTUALLY BE SUFFICIENT HOWEVER". PROBLEM:

"SPECIFICATIONS MANUAL DOES NOT INDICATE THE CONTENTS OF-SOME MESSAGES AND IN INDECISIVE FOR OTHERS".

TRACES TO:

DATAS D+040+FIRST+CMCR8+REQ+UPDATE+DATA

DATAS D+056+NEEDED+FEASIBLE+DATA

D+125+REQ+DESTINATION+SENSOR+ID+DATA BATAS

DATAS D+126+REQ+REPORT+INFORMATION+TYPE+DATA

DATAL D+127+RED+SENSOR+TARGET+ID+OF+INTEREST+DATA

DATA: D+133+SECOND+CMDRS+RFQ+UPDATE+DATA

D+137+SENSOR+PRIORITY+DATA DATAS

DATA: D+138+TASKING+RESPONSE+DATA

DATA: D+139+TASK+QUE+ID+DATA.

DECISION: DECISION+MESSAGE+ROUTING+METHOD. ALTERNATIVES:

"LET THE ROUTING CODE CONSIST OF NOTHING OF GIVE IT

A FORM".

CHOICE:

"ROUTING CODE CONSISTS OF A MESSAGE NAME, THE MESSAGE SOURCE, AND THE MESSAGE DEFINITION".

PESCRIPTION:

"THE MESSAGE ROUTING CODE IS USED TO DETERMINE MESSAGE TYPE AND THEREFORE THE PROPER ACTIONS TO BE PERFORMED. THE CODE CONSISTS OF A MESSARE NAME, THE MESSAGE SOURCE, AND THE MESSAGE DEFINITION".

PROBLEM: "SPECIFICATION MANUAL REFERS TO A ROUTING CODE WHICH IS SPECIFIC FOR EACH TYPER OF MESSAGE OR REPORT, BUT THERE IS NO INDICATION AS TO WHAT THAT CODE CONSISTS OF".

TRACES TO:

DATA: D+002+ASET+MSG+DEST+DATA

D+903+ASFT+MSG+ID+DATA DATAS

D+004+ASET+MSG+NAME+DATA DATAL

DATA: Degos+ASFT+MSG+SourcE+DATA.

DECISION: HIGHLY+SUSPECT+ITEM.

DESCRIPTION:

MAN ITEM WITHIN THE CREATED STRUCTURES THAT MAY BE TOTALLY WRONG DUE TO A MISINTERPRETATION BY A SREMER".

PROBLEM:

"THERE ARE MANY AREAS IN THE ASE SPECIFICATION WHERE THE REGUIREMENT IS STATED PUT LITTLE OR NO INFORMATION IS GIVEN AS TO HOW THE ITEM IS TO BE PEPRESENTED .

TRACES TO:

DATA: D+004+ASFT+MSG+NAME+DATA.

TRADY CUMMAND=

3.1 PHOGRAM DEFINITIONS (*

> This paragraph contains input/output interfaces, the messages that cross them and an overview of the system LIST THE+INTERFACES.

```
INPUT+INTERFACE: INTO+NELS+SENSOR.
      DATE+ENTERED: 110681.
      DESCRIPTION:
               *RECEIVES MESSAGES FOR NARROWBAND EMITTER
     LOCATOR SYSTEM".
      FNTERED+RY: "JJF-NELS".
      CONNECTS TO:
            SUBSYSTEM: .SS+1+REST+OF+ASE.
      PASSES!
            MESSAGE: M+01+FS+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN
            MESSAGE: M+02+NELS+CARTO+UPDATES+MSG+IN
            MESSAGE: M+03+MELS+CCMMANDERS+REQUIREMENTS+MSG+IN
            MFSSAGE: M+04+NELS+MCDIFIED+TASK+MSG+IN
            MESSAGE: M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN
            MESSAGE: M+08+NELS+PRIORITIZED+SENSOR+PIRECTIONS+MSG+IN
            MESSAGE: M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN
            MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN.
       TRACED FROM:
            OPIGINATING+REQUIREMENT: URIS+REQ+NELS+EXTFRNAL+INTEPFACF.
       REFERRED BY:
            RENET: REZEMODELENELSESENSORESYSTEMERENET.
  OPTPUT+INTERFACE: TO+TIMING+4NC+CONTROL+FROM+NELS.
       PATE+ENTERED: 110681.
DESCRIPTION: "PASSES MESSAGES BOUND FOR ASE VIA TEC".
       ENTERED+BY: "JJF-NELS".
       CUNNECTS TO:
            SUBSYSTEM: SS+1+REST+OF+ASE.
       PASSES:
            MESSAGE: M+05+NELS+NCN+SURVETLLANGE+TAPGET+REPORTS+MSG+0"T
            MESSAGE: M+07+NELS+PLATFORM+LUCATION+REPORTS+MSG+UHT
            MESSAGE: M+10+NELS+SENSCR+REQUESTS+MSG+OUT
                     M+11+NELS+SENSOP+SYSTEM+STATUS+MSG+OUT
            MESSAGE
                      M+12+NELS+SURVETLLANCE+TARGET+REPORTS+MSG+OUT
            MESSAGEL
            MESSAGE
                      M+13+NELS+TASKING+RESPONSES+MSG+OUT
            MESSAGET ME14+MELS+TRACK+MESSAGE+MSG+D IT.
       TRACED FROM
            ORIGINATING+REQUIREMENT: ORIG+RED+NELS+EXTERMAL+INTERFACE.
       REFERRED BY:
            RENET: REZEMODELENELSESSORESYSTEMERETET
            SUBMET: S+1+CHFCK+NELS+SENSUP+STATUS+SUB
                    S+2+DO+NELS+CPERATIONAL+CUNTROL+SUR.
            SUBNET:
TRADY CUMMAND=
                 LIST THE+MESSAGES.
  MESSAGE: M+01+ES+NFLS+UNTT+AND+ENVIRONMENT+DATA+MSG+IN.
        DATE + ENTERED: 110241.
       DESCRIPTION: "NELS SCENAPIC".
        ENTEREDORY: "JJF-NELS".
       MARE BYS
             DATA: D+003+ASFT+MSG+ID+DATA
             FILE: F+16+NELS+EMITTER+FILE.
       PASSED THROUGH:
```

INPUT+INTERFACE: INTO+NELS+SFNSOR.

```
TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+02+NELS+CARTO+UPDATES+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "UPDATES TO CARTOGRAPHIC FILE".
     ENTEREDORY: "JJF-NELS".
     HADE BY:
          DATA: D+003+ASFT+MSG+ID+DATA
          FILE: F+02+CARTO+UPDATE+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTC+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+03+NELS+COMMANUERS+REQUIREMENTS+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "COMMANDERS REQUIREMENTS FOR SENSORS".
     ENTERED+BY: "JJF-NELS".
     MADE BY:
          DATA: P+003+4SFT+MSG+ID+DATA
          FILE: F+04+CMDRS+DATA+TO+UPDATE+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+04+NELS+MODIFIED+TASK+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "MODIFICATIONS TO SENSOR TASKS".
     ENTERED+BY: "JJF=NELS".
     MADE BY:
                 D+003+ASET+MSG+ID+DATA
          DATAL
          DATA: D+056+NEEDED+FEASIBLE+DATA
          DATA: D+139+TASK+QUE+ID+DATA
          FILE: F+05+FEASIBLE+ACTIVITY+AREA+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MFSSAGE: M+05+NELS+NON+SHRVEILLANCE+TAPGET+REPORTS+MSG+OHT.
     DATE+ENTERED: 110281.
     DESCRIPTION:
             "TARGETS NO LONGER UNDER SURVEILLANCE BY THE
   NELS SENSORS. (NOTE: THE FOLLOWING ITEMS ARE
   APPLICABLE TO SENSOR TYPES AS SHOWN RELOW:
   GROUND+TARGET+FREQUENCY+DATA WELS, NELS UNLY
   GROUND+TARGET+LENGTH+DATA
                                 IS ONLY
                                 MTI ONLY) ".
   GROUND+TARGET+VELOCITY+DATA
     ENTERED+BY: "JJF-NFLS".
     FORMED BY:
          ALPHA: A+20+NEI S+SI'RVEILL ANCE+AND+TRACK+4SGS+ALPHA.
     MADE BYS
          DATAS
                D+003+ASFT+MSG+ID+DATA
          DATAL
                 U+045+GPS+TD+DATA
          DATAL
                 D+046+GROUND+TARGET+FREQUENCY+DATA
                 D+047+GROUND+TARGET+LENGTH+DATA
          DATAL
```

```
DATAS
                 D+050+GROUND+TARGET+VELOCITY+DATA
          FILES
                F+07+GROUP+TARGET+LOCS+FILE.
     PASSED THROUGH:
          OUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NELS.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REO+NELS+EXTERNAL+INTERFACE.
MESSAGE:
         M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "SENSOR PLATFORM ORBIT MODIFICATIONS".
     ENTERED+BY: "JJF-NELS".
     MADE BY:
          DATA: P+003+ASFT+MSG+ID+DATA
          DATA: D+135+SENSOR+ID+DATA
          FILE: F+32+SENSOR+ORPIT+MODS+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTC+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE
          ORIGINATING+REQUIREMENT: ORIG+REQ+SENSOR+ACTIVITY+FLEMENTS
MESSAGE: M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     DATE+ENTERED: 110291.
     DESCRIPTION: "LOCATIONS OF NELS PLATFORMS".
     ENTEREDORY: "JJF-NELS".
     FORMED BY:
          ALPHA: A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA.
    MADE BY:
          DATA: D+003+ASFT+MSG+ID+DATA
          FILE: F+33+SENSUR+PLATFORM+LOCATION+FILE.
     PASSED THROUGH:
          OUTPUT+INTERFACF: TO+TIMING+AND+CUNTROL+FROM+NFLS.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+08+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
     DATE+ENTERED: 110281.
     DESCRIPTION: "SENSOR PRIORITIES".
     ENTERED+RY: "JJF-NELS".
     MADE BYE
          DATA: D+003+ASFT+MSG+ID+DATA
          DATAL
                 D+056+NEFDED+FEASIBLE+DATA
          DATA: D+135+SENSOR+ID+DATA
          DATA: D+137+SENSOR+PPIORITY+DATA
          FILE: F+05+FEASIBLE+ACTIVITY+AREA+FILE.
     PASSED THROUGH:
          INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+09+NELS+REWUESTED+SENSOR+DATA+MSG+IN.
     DATE+ENTERFOI 110281.
     DESCRIPTION: "ASE REDUFSTS FOR DATA FROM SENSORS".
     ENTERED+BY: "JJF-NELS".
     MADE BYS
          DATAL
                 D+003+ASFT+MSG+ID+DATA
          DATA: D+045+GPS+ID+DATA
```

```
FILE: F+07+GPOUP+TARGET+LOCS+FILE.
    PASSED THROUGH:
         INPUT+INTERFACE: INTO+NELS+SENSOR.
     TRACED FROM:
         ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+10+NELS+SENSOR+REQUESTS+M8G+OUT.
    DATE+ENTERED: 110281.
    DESCRIPTION:
             "IDLE SENSORS REQUEST TO ASE FOR SOMETHING TO .....
 DC".
    ENTERED+BY: "JJF-NELS".
    FORMED BY:
          ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA.
     MADE BY:
          DATA: D+003+ASFT+MSG+ID+DATA
          DATA:
               P+125+REQ+DESTINATION+SENSOR+ID+DATA
          DATA:
                D+126+REQ+REPORT+INFORMATION+TYPE+DATA
          DATAL
                D+127+RED+SENSCR+TARGET+ID+OF+INTEREST+DATA.......
         DATA: D+135+SENSOR+ID+DATA.
     PASSED THROUGH:
         OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS.......
     TRACED FROM:
         ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
MESSAGE: M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT.
    DATE+ENTERED: 110281.
DESCRIPTION: "STATUS OF NELS PLATFORMS". ...
     ENTERED+RY: "JJF-NELS".
    FORMED BY:
         ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA.
    MADE BY:
         DATA: D+003+ASFT+MSG+ID+DATA
         DATA: C+135+SENSOR+ID+DATA
         FILE: F+34+SENSOR+STATUS+FILE.
     PASSED THROUGH:
         OUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NFLS.
     TRACED FROM:
         ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTEPFACE.
MESSAGE: M+12+NELS+SURVEILLANCE+TAPGFT+REPORTS+MSG+OUT.
    DATE+ENTERED: 110281.
     DESCRIPTION:
            "TARGETS CURPENTLY UNDER SURVEILLANCE RY
   THE NELS SENSORS. (NOTE: THE FOLLOWING ITEMS
  ARE APPLICABLE TO SENSOR TYPES AS SHOWN BELOW:
  GROUND+TARGET+FREQUENCY+DATA WELS, NELS ONLY
   GROUND+TARGET+LENGTH+DATA
                                 IS ONLY
  GROUND+TARGET+VELOCITY+DATA MTI ONLY) ".
     ENTERED+RY: "JJF-NELS".
     FORMED BY:
         ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     MADE BYE
         DATAS
                D+003+ASFT+MSG+ID+DATA
         DATA:
                D+045+GPS+ID+DATA
         DATA:
                D+046+GROUND+TARGET+FREQUENCY+DATA
         DATA:
                D+047+GROUND+TARGET+LENGTH+DATA
                D+050+GROUND+TARGET+VELOCITY+DATA
         DATAS
```

FILE: F+07+GROUP+TARGET+LOCS+FILE. PASSED THROUGH: OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+PEQ+NELS+EXTERNAL+INTERFACE. MESSAGE: M+13+NELS+TASKING+RESPONSES+MSG+OUT. DATE+ENTERED: 110281. DESCRIPTION: "RESPONSES TO ASE TASKS". ENTERED+BY: "JJF-NELS". FORMED BY: ALPHA: A+11+NELS+MODIFY+TASK+ALPHA. MADE BY: DATA: D+003+ASET+MSG+ID+DATA DATA: D+138+TASKING+RESPONSE+DATA DATAL D+139+TASK+QUE+ID+DATA DATAS D+141+TIME+DATA. PASSED THROUGH: OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+PEQ+NELS+EXTERNAL+INTERFACE. MFSSAGE: M+14+NELS+TRACK+MESSAGE+MSG+OUT. DATE+ENTERED: 110281.
DESCPIPTION: "TARGET TRACK MESSAGES". ENTERED+RY: "JJF-NELS". FOPMED BY: ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA. MADE BY: DATA: D+003+ASFT+MSG+ID+DATA D+135+SENSOR+ID+DATA DATAL DATA: D+142+TRACK+MESSAGE+DATA FILE: F+02+CARTO+UPDATE+FILE. PASSED THROUGH: OUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NELS. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE. MESSAGE: M+15+T+AND+C+STOP+NELS+MSG+IN. DATE+ENTERED: 110281. DESCRIPTION: "SIGNAL TO STOP NARROWBAND SENSORS". ENTERED+BY: "JJF-NELS". MADE BY: DATA: D+003+ASET+MSG+ID+DATA. PASSED THROUGH: INPUT+INTERFACE: INTO+NELS+SENSOR. TRACED PROMI ORIGINATING+REQUIREMENT: ORIG+RED+TC+CYCLE+START. [RADX COMMAND= LIST THE+R+NETS.

R+NET: R+1+HANDLE+NELS+SFNSOR+AND+GPS+PROCESSING+R+NET. DATE+ENTERED: 12082. DESCRIPTION: "CONTROLS NELS SENSOR: IF TASKS ARE WAITING TO BE DONE, IT INVOKES THE SENSOR TO PERFORM THE NEXT TASK".

FNTFRED+RY: "JJF-NFLS".

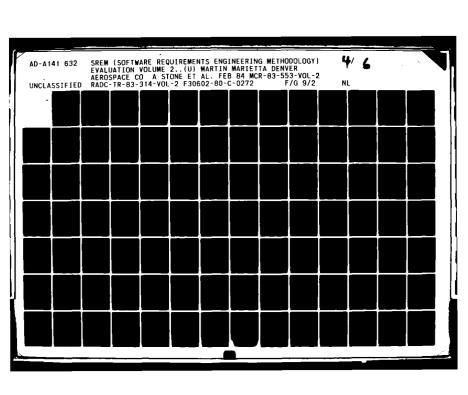
```
REFERS TOI
                 S+1+CHECK+NELS+SENSOR+STATUS+SUB
          SUBNET:
                  S+2+DO+NELS+CPERATIONAL+CONTROL+SUR.
          SUBNETE
    ENABLED BY:
          EVENT: E+1+ACTTV4TE+SENSOR+EVENT.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     STRUCTURES
                 S+2+DO+NELS+CPERATIONAL+CONTROL+SUB
        SUBNET:
        SUHNET: S+1+CHECK+NELS+SENSUR+STATUS+SUB
        TERMINATE
     END.
RONET: ROZOMODELONELSOSENSOROSYSTEMORONET.
     DATE+ENTERED: 11882.
     DESCRIPTION: "PROCESSING FLOW WITHIN NELS SENSOR SYSTEM".
     FNTERED+RY: "JJF=NFLS".
     REFERS TO:
                  A+O4+INTTTALIZE+NELS+ALPHA
          ALPHA:
          ALPHA:
                  A+09+NELS+MAKE+SENSOR+REGUESTS+ALPHA
                  A+10+NELS+MODIFY+ORRIT+ALPHA
          AL PHA 1
          ALPHAI
                  A+11+NELS+MODTFY+TASK+ALPHA
                  A+14+NELS+PROCESS+COMMANDERS+REQUIREMENTS+ALPHA
          ALPHA:
          AI PHA:
          A+15+NELS+PROCESS+PRICRITTZFD+SENSOR+DIRECTIONS+ALPHA
          ALPHA: A+16+NELS+PROCESS+REQUESTED+DAT4+ALPHA
          ALPHA: A+24+RESET+NELS+ALPHA
          ALPHA: A+25+UPPATE+CARTO+ALPHA
          DATA: D+004+ASFT+MSG+NAME+DATA
          DATA: P+140+TBP+PATA
          ENTITY+TYPE: ET+3+MELS+FLIGHT+FT
          ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+FT
          ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
          ENTITY+TYPE: ET+8+NELS+PPE+BRIFFED+ADI+ET
          INPUT+INTERFACE: INTO+NELS+SENSOR
          OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NFLS
                  S+1+CHFCK+NELS+SENSOR+STATUS+SHB.
          SHANETE
     TRACED FROM:
          ORIGINATING+REQUIREMENT: UPIG+REQ+NELS+EXTFRNAL+INTERFACE.
     STRUCTURE:
        INPUT+INTERFACE: INTO+NELS+SENSOR
        CONSIDER DATA: D+004+ASET+MSG+NAME+DATA
        IF (MN+01+ES+NELS+UMIT+AND+ENVIRONMENT+DATA)
           ALPHA: A+04+INITIALIZF+NELS+ALPHA
ALPHA: A+09+NFLS+MAKE+SENSOP+REQUESTS+ALPHA
           OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
        OR (MN+15+T+AND+C+STOP+NELS)
            ALPHA: A+24+RESET+NELS+ALPHA
            TERMINATE
        OP (MN+02+NFLS+CARTO+UPDATES OR
                                 MN+03+NELS+COMMANDERS+REQUIREMENTS OR
                                 MN+04+NELS+MUDIFIFU+TASK OR
                                 MN+06+NELS+ORBIT+MUDIFICATIONS OR
                           MULON-NELS-PRIORITIZED-SENSOR-DIRECTIONS OR
                           14H+09+NELS+PERUFSTED+SENSOR+DATA)
```

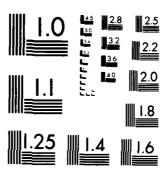
SUBNET: S+1+CHFCK+NELS+SENSOR+STATUS+SUB

```
TERMINATE
             AND
                CONSIDER DATA: D+004+ASET+MSG+NAME+DATA
                IF (MN+02+NELS+CARTO+UPDATES)
                    ALPHA: A+25+UPDATE+CARTO+ALPHA
                    TERMINATE
                 OR (MN+03+NFLS+COMMANDERS+REQUIREMENTS)
                    SELECT ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
                    SUCH THAT (D+140+TRD+DATA = TRUE)
                    SELECT ENTITY+TYPE: ET+8+NELS+PRE+BRIFFED+ADI+ET
                    SUCH THAT (D+140+TBD+DATA # TRUE)
                    ALPHA:
                    A+14+NELS+PROCESS+COMMANDERS+REGUIREMENTS+ALPHA
                    TERMINATE
                 OR (MN+06+NFLS+PRIORITIZED+SENSOR+DIRECTIONS)
                    SELECT ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+ET
                    SUCH THAT (D+140+TBD+DATA = TRUE)
                    ALPHA:
                   A+15+NELS+PROCESS+PRIORITIZED+SFNSOR+DIRECTIONS+ALPHA
                    TERMINATE
                 OR (MN+04+NFLS+MODIFIED+TASK)
                    SELECT ENTITY+TYPE: ET+3+NELS+FLIGHT+ET SUCH THAT
                    (D+140+TBD+DATA = TRUE)
                    ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
                    OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+MELS
                 OR (MN+06+NELS+ORPIT+MODIFICATIONS)
                    SELECT ENTITY+TYPE: ET+3+NELS+FLIGHT+ET SUCH THAT
                    (D+140+TRD+DATA = TRUE)
                    ALPHA: 4+10+NELS+MODIFY+ORBIT+ALPHA
                    TERMINATE
                 OR (MN+09+NFLS+REGUESTED+SENSOR+DATA)
                    SELECT ENTITY+TYPE: ET+3+NELS+FLIGHT+FT SUCH THAT
                    (D+140+T9D+DATA = TRUE)
                    ALPHA: A+16+NELS+PROCESS+PERUFSTED+DATA+ALPHA
                    TERMINATE
                 END
             END
          END
       END.
TRADY CUMMANDS
                FUNCTIONAL REQUIREMENTS
(*
             3.2
                     This paragraph contains the breakdown
                  of all necessary processing requirements *)
                 LIST THE+SUBMETS.
  SUBNET: S+1+CHECK+MELS+SENSOR+STATUS+SUP.
       DATE+ENTERED: 12082.
       DESCRIPTION:
                "ACTIVATES OPERATION OF NELS SENSOR AND HANDLES
     DETERMINATION OF SENSOR STATUS".
       ENTEREP+BY: "JJF-NELS".
       REFERS TO:
                    A+17+NELS+SENSUR+STATUS+ALPHA
             ALPHA:
             DATA: D+136+SENSOR+MCDE+OF+OPERATION+DATA
                                    D = 2.2
```

```
DATA: D+140+T8D+DATA
         ENTITY+TYPE: ET+3+NELS+FLIGHT+ET
         ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
         ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+AGI+ET
         EVENT: E+1+ACTIVATE+SENSOR+EVENT
         OUTPUT+INTERFACF: TO+TIMING+AND+CONTROL+FROM+NELS.
    TRACED FROM:
         OPIGINATING+REQUIREMENT: ORIG+REG+NELS+EXTERMAL+INTERFACE.
    REFERRED BY:
                 R+1+HANDLE+NELS+SENSOR+AND+GPS+PROCESSING+R+NET
         RONET:
         R+NET1
                 R+2+MODFL+NELS+SENSOR+SYSTEM+R+NET.
    STRUCTURE:
       SELECT ENTITY TYPF: ET+3+NELS+FLIGHT+ET SUCH THAT
       (D+140+TBD+DATA = TRUE)
       SELECT ENTITY+TYPF: ET+5+NELS+PRE+BRIEFED+SOI+ET SUCH THAT
       (D+140+TBD+DATA = TRUE)
       SELECT ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+4UI+ET SUCH THAT
       (D+140+T8D+DATA = TQUE)
       ALPHA: A+17+NELS+SFNSOR . ATUS+ALPHA
       0.0
          nutput+interface: TC+TIMING+AND+CONTROL+FROM+NELS
        AND
          CONSIDER DATA: 0+136+SENSOR+MUDE+UF+OPERATION+DATA
           IF (IDLE)
          OR (SOI+SURVEILLANCE OR SOI+SEARCH OR AOI+SURVEILLANCE
                                                 OR ACI+SEARCH)
             EVENT: E+1+ACTIVATE+SENSOR+EVENT
          END
          TERMINATE
        AND
          RETURN
       END
    FND.
SUBNET: S+2+DO+NELS+OPERATIONAL+COMTPOL+SUR.
     DATE+ENTERED: 11882.
     DESCRIPTION: "CONTROL OF GPS, SENSOR AND PLATFORM PROCESSING".
    FNTERED+RY: "JJF=NELS".
     REFERS TO:
                  A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA
          ALPHAI
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA
          OUTPUT+INTERFACE: TO+TIMING+AND+CONTROL+FROM+NELS
          SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR
          SUBNET:
                   S+4+MODEL+NELS+PLATFORM+SUR
                   S+5+MODEL+NELS+SENSOR+SUB.
          SUBNETE
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     PEFERRED BY:
                 R+1+HANDLE+NELS+SENSOP+AND+GPS+PROCESSING+R+NET.
          R+NET:
     STRUCTURES
                 S+4+MODEL+NELS+PLATFORM+SUR
        SUBNETE
        00
           PETURN
           ALPHA: A+13+NFLS+PLATFORM+LOCATION+MSG+ALPHA
           OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
        AND
```

```
SUBNET: S+5+MODEL+NELS+SENSOR+SUB
SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUB
           ALPHA: A+20+NFLS+SUPVEILLANCE+AND+TRACK+MSG3+ALPHA
           OUTPUT+INTERFACE: TC+TIMING+AND+CONTROL+FROM+NELS
       END
     END.
SUBNET: S+3+MODEL+NELS+GPS+PPOCESSING+SUP.
     DATE+ENTERED: 11982.
     DESCRIPTION: "NELS GROUND PROCESSING STATION (GPS) PROCESSING".
     ENTERED+BY: "JJF-NELS".
     PEFERS TO:
          ALPHA: A+06+NELS+COARSE+LOCATION+ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+08+NELS+FREGUENCY+SCAN+OPTIMIZATION+ALPHA
          ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA
          ALPHA: A+21+NELS+TARGET+ACRUISITION+ALPHA
          ALPHA: A+23+NELS+THREAT+TABLE+UPDATE+ALPHA.
          DATA: D+140+TBD+DATA
          ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT:
          ORIGHRER+NELS+COARSE+AND+FINE+LOCATION
          ORIGINATING+REQUIREMENT: ORIGHREQ+NELS+SCAN+OPTIMIZATION
          OPIGINATING+REQUIPEMENT:
                                    ORIGHREG+NELS+SIGNATURE+ANALYSIS
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+TARGET+ACQUISITION
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+THREAT+TABLE+UPDATE
     REFERRED BY:
          SUBNET: S+2+DO+NFLS+OPERATIONAL+CONTROL+SUB.
     STRUCTURE:
        AL PHA:
               A+21+NELS+TARGET+ACRUISITION+ALPHA
        ALPHA:
               A+06+NELS+COARSE+LOCATION+ALPHA
        ALPHA:
               A+07+NELS+FINE+LOCATION+ALPHA
        ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA
        DO.
           SELECT ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET
           SUCH THAT (D+140+TBD+DAT) = TRUE)
           ALPHA: A+23+NELS+THPEAT+TABLE+UPDATE+ALPHA
                   A+08+NFLS+FREQUENCY+SCAN+OPTIMIZATION+ALPHA
           ALPHA:
        END
        RETURN
     END.
SUBNET: S+4+MODEL+NELS+PLATFORM+SUB.
     DATE+ENTERED: 11882.
     DESCRIPTION: "NELS PLATFORM OFERATIONS".
     ENTERED+BY: "JJF-NELS".
     REFERS TO:
          ALPHA: A+01+DMF+INS+NOISE+GENERATION+ALPHA
          ALPHA: A+02+GENERATE+DME+ALPHA
          ALPHA: A+03+GEMERATE+INS+ALPHA
          DATA: 0+140+TBD+DATA
          ENTITY+TYPE: ET+3+NELS+FLIGHT+FT.
     TRACED FROM:
```





MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963-A

```
ORIGINATING+REGUIREMENT:
                                    ORIGHRER+GENERATE+DME
          ORIGINATING+REQUIREMENT:
                                    ORIGHRER+GENERATE+INS
          ORIGINATING+REQUIREMENT:
                                    ORIG+REQ+GENERATE+NOISE
         UPIGINATING+REQUIREMENT:
          ORIGHPEN+GENERATE+PLATFORM+MEASUREMENTS.
     REFERRED BY:
          SHENET: S+2+DO+NELS+CPFRATIONAL+CONTROL+SUB.
     STRUCTURE:
        SELECT ENTITY+TYPE: ET+3+NELS+FLIGHT+ET SUCH THAT
        (D+140+TBD+DATA = TRUE)
        ALPHA:
               A+02+GENERATE+DME+ALPHA
               A+03+GENERATE+INS+ALPHA
        ALPHA:
        ALPHA:
                A+01+DME+INS+NOISE+GENERATION+ALPHA
        RETURN
    END.
SUBNET: S+5+MODEL+NELS+SFNSOR+SUR.
     DATE+ENTERED: 11882.
     DESCRIPTION: "NELS SENSOR ACTIVITIES".
     ENTERED+HY: "JJF=NELS".
     REFERS TO:
          ALPHA: A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+1R+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          ALPHA: A+19+NELSCS:GNAL+TO+NDISE+DETECTABILITY+ALPHA
          ALPHA:
                 A+22+NELS+TERRAIN+FOLIAGE+SHADOWING+ALPHA
          DATA: D+140+TBD+DATA
         ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
          ENTITY+TYPE: ET+5+NELS+PRE+BRIEFED+SOI+ET
          ENTITY+TYPE: ET+6+NELS+VEHICLE+CHARACTERTSTICS+ET
         ENTITY+TYPE: ET+7+NELS+WEATHER+ET
          ENTITY+TYPE: ET+8+NELS+PRE+BRIFFED+ADI+ET
         ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
                                   ORIGHRED+NELS+ADI
          ORIGINATING+REQUIREMENT:
                                   ORIGHREQ+NELS+EMITTER+DEFAULT
          OPIGINATING+REQUIREMENT:
                                   ORIGHREQ+NELS+SIGNAL+OF+INTEREST
          OPIGINATING+REQUIREMENT:
                                   ORIGOREOUNELS+SIGNAL+TO+NOISE
          ORIGINATING + REQUIREMENT:
                                   ORIGOREDONELSOTERRAINOSHADOWING.
     REFERRED BY:
          SUBNET: 5+2+DO+NELS+CPERATIONAL+CONTPOL+SUR.
     STPUCTURE:
        SFLECT ENTITY+TYPF: FT+6+NELS+VEHICLE+CHARACTERISTICS+ET
        SUCH THAT (D+140+TBD+DATA = TRUE)
        SELECT ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET
        SUCH THAT (D+140+TBD+DATA = TRUE)
        ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
        SELECT ENTITY+TYPF: ET+5+NELS+PRE+BRIEFED+SOT+ET SUCH THAT
        (D+140+TBD+DATA = TRUE)
        ALPHA: A+OS+NELS+AREA+CF+INTEREST+FILTER+ALPHA
        SELECT ENTITY+TYPE: ET+8+NELS+PRE+BRIEFED+AGI+ET SUCH THAT
        (D+140+TBD+DATA = TRUE)
        SELECT ENTITY+TYPF: ET+7+NELS+WEATHER+ET SUCH THAT
        (D+140+TOP+DATA = TRUE)
        ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETECTABILITY+ALPHA
        SELFCT ENTITY+TYPF: FT+9+SIGNAL+NUISE+CANDIDATE+TARGETS+ET
        SUCH THAT (D+140+TBD+DATA # TRUE)
```

ALPHA: A+22+NELS+TERPAIN+FOLTAGE+SHADOWING+ALPHA

RETURN END.

[RADY COMMAND=

```
LIST THE+ALPHAS.
```

```
ALPHA: A+01+DME+INS+NUISE+GENERATION+ALPHA.
    BETA:
     "BEGIN
 D+018+ASP+PITCH+DATA := D+018+ASP+PITCH+DATA + 0.01
  JD+019+ASP+ROLL+DATA := D+019+ASP+ROLL+DATA - 0.01
  10+025+ASP+YAW+DATA 1= D+025+ASP+YAW+DATA + 0.01
  ID+010+ASP+ALTITUDE+DATA := D+010+ASP+ALTITUDE+DATA = 0.01
  10+012+ASP+LATITUDE+DATA 1= 0+012+ASP+LATITUDE+DATA + 0.01
  #D+017+ASP+LONGITUDE+DATA := D+017+ASP+LONGITUDF+DATA - 0.01
  JOHO144ASPHLOCHX+DATA := DHO144ASPHLOCHX+DATA + 0.01
  IP+015+ASP+LUC+Y+DATA := D+015+ASP+LUC+Y+DATA - 0.01
  ID+016+ASP+LOC+Z+PATA := D+016+ASP+LOC+Z+DATA + 0.01
  :D+021+ASP+TIME+DATA := D+021+ASP+TTME+DATA = 0.01
  ID+022+ASP+VEL+X+DATA := D+022+ASP+VEL+X+DATA + 0.01
  ID+023+ASP+VEL+Y+DATA I= D+023+ASP+VEL+Y+DATA - 0.01
  :D+024+ASP+VEL+Z+DATA := D+024+ASP+VEL+Z+DATA + U.01
ENDI".
     DATE + ENTERED: 11182.
     DESCRIPTION:
             "MODELS SENSOR PLATFORM ACTIVITY BY ASSUMING THAT DME
   ERRORS ARE GAUSSIAN DISTRIBUTED WITH A CONSTANT MEAN, AND INS
   ERRURS ARE ZERO MEAN GAUSSIAN DISTRIBUTED".
     ENTEREDORY: "JJF-NELS".
     GAMMA:
       TYAR SSRAND : REAL
    FUNCTION SSRANDU : REAL
      * REGIN
        SSRAND := 29.0 + SSRAND + 357.0
        :SSRAND := SSRAND - TRUNC(SSRAND)
        :SSPANDU := SSRAND
       END
    FUNCTION SSSIGN : REAL
      :REGIN
        IF SSRANDU < 0.5 THEN SSSIGN := -1.0
        ELSE SSSIGN := 1.0
       FND
    : PEGIN
       SSRAND := 0.801463
      ID+018+ASP+PITCH+DATA IT
         De018+ASP+PITCH+DATA + SSSIGN * SSRANDU
      ID+019+4SP+ROLL+DATA IR
         D+019+ASP+ROLL+DATA + SSSIGN * SSRANDU
      ID+025+ASP+YAW+DATA I=
         D+025+45P+YAM+DATA + SSSIGN + SSRANDU
      ID+010+ASP+ALTITUDE+DATA 1=
         D+010+ASP+ALTITUDE+DATA + SSSIGN + SSRANDU
      :D+012+ASP+LATITUDE+DATA :=
         D+012+45P+LATITUDE+DATA + SSSIGN * SSRANDU
      ID+017+ASP+LONGITUDE+DATA IE
         D+017+ASP+LONGITHDE+DATA + SSSIGN + SSRAND'!
```

```
ID+014+ASP+LOC+X+DATA IF
        D+014+ASP+LOC+X+DATA + SSSIGN * SSRANDU
     ID+015+ASP+LOC+Y+DATA IF
        D+015+ASP+LOC+Y+DATA + SSSIGN * SSRANDU
     ID+016+ASP+LOC+Z+DATA IF
        D+016+ASP+LOC+Z+DATA + SSSIGN * SSRANDU
     ID+022+ASP+VEL+X+DATA IF
        D+022+ASP+VEL+X+DATA + SSSIGN + SSRANDU
     ID+023+ASP+VEL+Y+DATA IF
        D+023+ASP+VEL+Y+DATA + SSSIGN * SSRANDU
     ID+024+ASP+VEL+Z+DATA IS
        D+024+ASP+VEL+Z+PATA + SSSIGN * SSRANDU
    END!".
    INPUTS:
                D+011+ASP+ATTITUDE+DATA
         DATAS
                D+013+ASP+LOCATION+DATA
         BATAG
                D+020+ASP+STATE+VECTOR+DATA.
         BATAS
    OUTPUTS:
                D+011+ASP+ATTITUDE+DATA
          DATAL
                D+013+ASP+LOCATION+DATA
          DATAS
          DATAL
                D+020+ASP+STATE+VECTOR+DATA.
    TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+NOISE.
    PEFERRED BY:
                  S+4+MUDEL+NELS+PLATFORM+SUB.
          SUBNET:
        A+02+GENERATE+DME+ALPHA.
ALPHA:
    RETAI
           "BEGIN
  D+021+ASP+TIME+DATA 1= D+141+TIME+DATA
  ISELECT FIRST RECORD FROM
          F+06+FLIGHT+PROFILE+FILE
  ID+014+ASP+LOC+X+DATA := D+041+FLIGHT+WAYPUINT+X+DATA
  ID+015+ASP+LOC+Y+DATA := D+042+FLIGHT+WAYPOINT+Y+DATA
  ID+016+ASP+LUC+Z+PATA I= D+043+FLIGHT+WAYPUINT+Z+DATA
  10+022+ASP+VEL+X+DATA IE 0.0
  10+023+ASP+VEL+Y+DATA := 0.0
  ;C+024+ASP+VEL+Z+DATA 1= 0.0
ENDI".
     DATE+ENTERED: 11182.
     DESCRIPTION:
     "GENERATES ASP (AIRBORNE SENSOR PLATFORM) STATE VECTOR".
     ENTERED+BY: "JJF-NFLS".
     GAMMA:
       WVAR
        SSFIRST : BOOLEAN:
   PEGIN
   IF SSFIRST THEN REGIN
     SELECT FIRST RECORD FROM
            F+06+FLIGHT+PPOFILE+FTLE
   END
   ELSE BEGIN
     SELECT NEXT RECORD FROM
            F+06+FLIGHT+PPOFILE+FILE
   ISELECT FIRST RECORD FROM
           F+27+PLATFORM+CONTROL+FILE
   INHILE (D+041+FLIGHT+WAYPOINT+X+DATA <> D+D14+4SP+LOC+X+DATA)
```

```
AND (0+042+FLIGHT+WAYPOINT+Y+DATA <> D+015+ASP+LOC+Y+DATA)
     AND (U+043+FLIGHT+WAYPDINT+Z+DATA <> D+016+ASP+LOC+Z+DATA) DD
    BEGIN
       SELECT NEXT RECORD FROM
              F+27+PLATFOPM+CONTROL+FILE
    END (*WHILE*)
     : (* ASSIGN VALUES TO ASP STATE VECTOR DATA *)
     D+014+ASP+LOC+X+DATA := D+041+FLIGHT+WAYPOINT+X+DATA
     ID+015+ASP+LUC+Y+DATA I D+042+FLIGHT+WAYPDINT+Y+DATA
     JD+016+ASP+LOC+Z+DATA := D+043+FLIGHT+WAYPDINT+Z+DATA
     D+021+ASP+TIME+DATA IN CLOCK+TIME
     ID+022+ASP+VEL+X+DATA IN D+022+ASP+VEL+X+DATA
     10+023+ASP+VEL+Y+DATA I= D+023+ASP+VEL+Y+DATA
     10+024+ASP+VEL+Z+DATA 1= D+024+ASP+VEL+Z+DATA
  ENDI".
     INPUTS:
          DATA: D+141+TIME+DATA
          FILE: F+06+FLIGHT+PRCFILF+FILE
          (* USED TO GENERATE DME *)
          FILE: F+27+PLATFORM+CONTROL+FILE.
     OUTPUTS:
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+DME
          OPIGINATING+REGUIREMENT:
          ORIGHRESHGENERATE+PLATFORM+MEASUREMENTS.
     REFERRED BY:
          SUBNET: S+4+MODEL+HELS+PLATFORM+SUB.
ALPHA:
       A+03+GENERATE+INS+ALPHA.
     HETAL
     "BEGIN
 D+018+ASP+PITCH+DATA := 0.0
  JD+019+ASP+ROLL+DATA := 0.0
  1D+025+ASP+YAW+DATA := 0.0
  IC+010+ASP+ALTITUPE+DATA IT D+014+ASP+LOC+X+DAT
  :D+012+ASP+LATITUDE+DATA := D+015+ASP+LOC+Y+DATA
  ID+017+ASP+LONGITUDE+DATA I= D+016+ASP+LUC+Z+DATA
END:".
     DATE+ENTERED: 11182.
     DESCRIPTION:
             "GENERATES INS (INERTIAL NAVIGATION SYSTEM)
   MEASUREMENTS".
ENTERED+RY: "JJF-NFL9".
     GAMMA :
       "CONST CENTLAT = 45.0
             ICENTLONG = 20.0
       IVAR SSRAND : REAL
    IFUNCTION SSRANDU I REAL
      : REGIN
        SSRAND := 29.0 + SSRAND + 357.0
        :SSRAND := SSRAND - TPUNC(SSRAND)
        :SSRANDU I= SSRAND
       FND
       *FUNCTION SSSIGN * REAL
         PHEGIN
           IF SSRANCU < 0.5 THEN SSSIGN := -1.0
           FLSE SSSIGN := 1.0
```

```
END
       , REGIN
         SSRAND := 0.63904
         10+010+ASP+ALTITUDE+DATA 1= D+016+ASP+LOC+Z+DATA
         ;D+012+ASP+LATITUDE+DATA :=
            D+015+ASP+LOC+Y+DATA / 60.0 + CENTLAT
         10+017+ASP+LONGITUDE+DATA 1=
            D+014+ASP+LOC+X+DATA / 60.0 + CENTLONG
         ;D+018+ASP+PITCH+DATA := + SSSIGN + SSRAND!
         10+019+ASP+ROLL+DATA := + SSSIGN * SSPANDU
         10+025+ASP+YAW+UATA := + SSSIGN + SSRANDU
    END:".
     INPUTS:
          DATA: D+020+ASP+STATE+VECTOR+DATA.
     OUTPUTS:
          DATA: D+011+ASP+ATTITUDE+DATA
          DATA: D+013+ASP+LOCATION+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG#REQ#GENERATE#INS.
    REFERRED BY:
                  S+4+MODEL+NELS+PLATFORM+SUR.
          SUBNET:
ALPHA: A+04+INITIALIZE+NELS+ALPHA.
    BETA:
            "BEGIN
    FOR EACH F+16+NFLS+EMITTER+FILE RECORD DO BEGIN
     CREATE F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE RECORD
      :D+063+B+NELS+EMISSION+START+TIME+DATA :=
          D+063+A+NELS+EMISSION+START+TIME+DATA ;
        D+064+NELS+EMISSION+STOP+TIME+DATA :=
          D+064+A+NELS+EMISSION+STOP+TIME+DATA;
      P+082+NELS+EMITTER+VEL+X+DATA :=
          D+082+A+NFLS+EMITTER+VEL+X+DATA;
      D+083+NELS+EMITTER+VEL+Y+DATA :=
          D+083+A+NFLS+EMITTER+VEL+Y+DATA;
       D+084+NELS+EMITTER+VEL+Z+DATA :=
          D+084+A+NELS+EMITTER+VEL+Z+DATA:
        D+073+B+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
          D+073+A+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA;
        D+075+8+NELS+EMITTER+ID+DATA :=
          D+075+A+NELS+EMTTTEP+ID+DATA:
        D+085+8+NELS+EMITTER+X+DATA 12
          D+085+A+NELS+EMITTER+X+DATA:
        D+OA6+B+NELS+EMITTER+Y+DATA :=
          D+086+A+NFLS+EMITTER+Y+DATA ;
        D+087+8+NELS+EMITTER+Z+DATA . #=
          U+087+A+NFLS+EMITTER+Z+DATA ;
        D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
          D+381+A+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA ;
        D4130+B+SCEMARIO+GEN+ID+NUM+DATA :=
          D+130+A+SCENARIO+GEN+ID+NUM+DATA
    END ENDFOREACH
    CREATE F+06+FLIGHT+PROFILE+FILE RECORD
      10+041+FLIGHT+WAYPOINT+X+DATA IE 0.0
      ;D+042+FLIGHT+WAYPOINT+Y+DATA := 0.0
      ID+043+FLIGHT+WAYPOINT+Z+DATA 1= 0.0
    *CREATE F+27+PLATFORM+CONTROL+FILE RECORD
      ID+010+ASP+ALTITUDE+DATA := 0.0
```

```
ID+014+ASP+LOC+X+DATA IE 0.0
   in+015+ASP+LOC+Y+DATA := 0.0
   ID+016+ASP+LOC+Z+DATA IE 0.0
   :D+022+ASP+VEL+X+DATA := 0.0
   IN+023+ASP+VEL+Y+DATA #= 0.0
   :D+024+ASP+VEL+Z+DATA 1= 0.0
 SCREATE F+19+NELS+FREQUENCY+SCAN+FILE RECORD
    ID+092+NELS+FREQ+SCAN+LOWER+FREQ+DATA := 0.0
    10+093+NELS+FREG+SCAN+UPPER+FREG+DATA := 0.0
 CREATE F+20+NELS+PRE+BRIEFED+ADI+FILE RECORD
    10+095+NELS+PRE+BRIEFFD+ACI+FILTERING+CRITERIA+DATA ##
    WITHINGAREA
    ID+097+NELS+PPE+BRIFFED+ACI+LDWER+LEFT+X+DATA := 0.0
    ID+098+NELS+PRE+BRIFFFD+ADI+LOWER+LEFT+Y+DATA := 0.0
    in+100+Nels+PRE+BRIFFED+ACI+UPPER+RIGHT+X+DATA := 0.0
    ;D+101+NELS+PRE+BRIFFED+ACI+UPPER+RIGHT+Y+DATA := 0.0
  ICREATE F+21+NELS+PRE+BRIEFFD+SOI+FILE RECORD
    IN+103+NELS+PRE+BRIEFED+SOI+END+FRED+DATA := 0.0
    ; n+104+NELS+PRE+BRIFFED+SCI+FREQ+DATA := 0.0
    ; D+105+NELS+PRE+BRIFFED+SOI+MODULATION+TYPE+DATA := MODULATED
    : D+106+NELS+PPE+BRIFFFD+SCI+START+FREQ+DATA := 0.0
  ICREATE F415+NELS+EMITTER+CHARACTERISTICS+FILE RECORD
    ID+067+NELS+EMITTER+BANDWIDTH+DATA := 0.0
    ID+077+A+NELS+EMITTER+MODILATION+TYPE+DATA := MODULATED
    ID+078+A+NELS+EMITTER+POWER+LEVEL+DATA 18 0.0
  *CREATE F+26+NELS+WEATHER+CONDITIONS+FILE RECORD
    ID+144+X+WEATHER+LOC+DATA := 0.0
    ID+146+Y+WEATHER+LOC+DATA := 0.0
    ID+039+ELEVATION+WEATHER+DATA IS 0.0
    :D+120+PRECIPITATION+DATA := NONE
    10+037+CLOUD+COVER+DATA 1= CLEAR
END:"
   PATE+ENTERED: 11182.
   DESCRIPTION: "MAKES TARGET AND WEATHER INFORMATION AVAILABLE".
   FNTEPED+RY: "JJF-NELS".
   CAMMAI
    "PEGIN
( + COPY NELS+EMITTER+FILE INTO NELS+EMITTER+ACTIVITY+GROUND *)
(* +TRUTH+FILE *)
FOR EACH F+16+NELS+EMITTER+FILE RECORD DO BEGIN
  CREATE F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE RECORD
  ID+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA IM
    D+071+NFLS+EMITTER+DATA END ENDFOREACH
EN0 . " .
   CREATES:
        ENTITY+CLASS:
                      EC+1+NELS+DETECTABLE+EMISSION+BREAKQUI+EC
        ENTITY+CLASS:
                       FC+2+NELS+SCENARIO+EC
        ENTITY+CLASS:
                       FC+3+NELS+TASKS+EC
        ENTITY+CLASS:
                       EC+4+NELS+THREAT+EC
                       FC+5+NELS+VEHICLE+CHARACTEPISTICS+EC
        ENTITY+CLASS:
        ENTITY+CLASS:
                       FC+6+DETECTED+EMISSIONS+INFO+EC.
   INPUTS:
        FILE:
               F+16+NFLS+EMITTER+FILE.
   PUTPUTS:
        FILE:
               F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
               F+15+NELS+EMITTER+CHARACTERISTICS+FILE.
        FILE:
   TRACED FROM:
        OPIGINATING+REQUIPEMENT: ORIG+PER+NELS+EXTERNAL+INTERFACE.
```

```
REFERHED BY:
           RONETI ROZOMODELONELSOSENSOROSYSTEMORONET.
        A+05+NELS+AREA+OF+INTFRFST+FILTFR+ALPHA.
      BETAL
            "VAR DREAL : REAL (* DUMNY REAL ITEM. *)
  IBEGIN
   FOR FACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO DEGIN
     ID+061+NELS+EMISSIUN+PURATION+DATA :=
        D+061+NELS+EMISSION+DURATION+DATA
      10+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
        D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
      #D+063+NFLS+EMISSION+START+TIME+DATA :=
        D+063+NELS+EMISSIUN+START+TIME+DATA
      :D+U73+NELS+EMITTER+FREQUENCY+BANDWINTH+DATA :=
        D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
      DOLOTS+NELS+EMITTER+ID+DATA 12 U+075+NFLS+EMITTER+ID+DATA
       ID+085+NELS+EMITTFR+X+DATA :=
          D+085+NELS+EMITTER+X+DATA;
        D+086+NELS+EMITTFR+Y+DATA :=
          Denshenel Seemitterey+Data :
        D+087+NELS+EMITTER+Z+DATA :=
          D+087+NELS+EMITTER+Z+D4TA ;
       D+081+NELS+FMITTER+TRANSMISSION+FREQUENCY+D4T4 :=
        T+081+NELS+EMITIER+TRANSMISSION+FREQUENCY+DATA
      :D+130+SCENARIC+GEN+TD+NUM+DATA :=
        D+1 50+SCENARID+GEN+ID+MUM+DATA
    END ENDEDREACH
    FOR EACH F+20+NFLS+PRF+BRIEFED+40I+FILE RECORD DO
      DREAL := D+097+NELS+PRF+RRIEFED+AUT+LUMER+LEFT+X+DATA
    ENDFORFACH
    IDREAL IS DEOLAHASPELUCEXEDATA
    SUPEAL IS PHOTPHASPHALTITUDE+DATA
    IDREAL := D+019+ASP+PITCH+DATA
ENDI".
      DATE+ENTFRED: 11182.
      DESCRIPTION:
              THE ADI FILTER REMOVES FROM THE CANDIDATE TARGET LIST
    THOSE EMISSIONS WHICH ARE LUCATED OUTSIDE OF THE ASE PPE+BRIEFFD
    AREA OF INTEREST".
      ENTERED+BY: "JJF-NELS".
      GAMMA:
        HVAR SSTEMPR : REAL
             ISSFILTER : BOOLEAN
    #BFGIN
       SSTEMPR 1= D+018+ASP+PITCH+DATA
      ISSTEMPR := D+010+ASP+ALTITUDE+DATA
      ISSTEMPR := D+014+ASP+LOC+X+DATA
      FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
        SSFILTER := FALSE
        ISFLECT FIRST RECUPD FROM
                F+20+NELS+PRE+BRIEFED+AUI+FILE
        INHILE FOUND AND NOT SSFTLTER DU BEGIN
          IF (D+097+NELS+PPE+BPIEFED+ADI+LOWER+LEFT+X+DATA <=
            D+085+NELS+EMITTFR+X+DATA) AND
            (0+100+NFLS+PRF+RRIEFEO+AUI+UPPER+RIGHT+X+DATA >=
            D+085+NEI S+EMITTFR+X+DATA) AND
            (D+098+NFLS+PRF+BRIEFED+AGI+LOWER+LEFT+Y+DATA <=
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D+086+NELS+EMITTER+Y+DATA) AND
           (D+101+NFLS+PRF+HRIEFED+40I+UPPER+RIGHT+Y+DATA >=
          D+086+NELS+EMITTER+Y+DATA) THEN SSFILTER 12 TRUE
         SELECT NEXT RECORD FROM
                 F+20+NELS+PRE+BRIEFED+AUI+FILE
      FND: (+ WHILF *)
       IF SSFILTER THEN BEGIN
        DESTRUY F+10+NELS+CANDIDATE+TARGETS+FILE RECORD
      END
    END ENDFOREACH
END:".
    INPUTS:
         DATA:
                D+011+ASP+ATTITUDE+DATA
         DATA:
                P+013+ASP+LOCATION+DATA
         DATA:
                D+020+450+STATE+VECTOR+DATA
         FILE:
                F+10+NELS+CANDIDATE+TARGETS+FILE
         FILE: F+20+NFLS+PRF+PRIEFED+AUI+FILE.
    OUTPUTS:
         FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
    TRACED FROM:
         ORIGINATING+REGHIREMENT: ORIG+REG+NELS+AOI.
    REFERRED BY:
          SUBNET: S+5+MODEL+NELS+SFNSOR+SUP.
ALPHA: A+06+NELS+COARSE+LOCATION+ALPHA.
    RETAI
            "VAR DREAL : PEAL
  : PEGIN
    SELECT FIRST RECORD FROM
          F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
    FOR EACH F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
    REGIN
   CREATE F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD
    ID+157+NELS+EMISSION+DUPATION+DATA :=
        D+157+NELS+EMISSION+DURATION+DATA
      ID+158+NELS+EMISSION+START+TIME+DATA :=
        D+158+NELS+FMISSION+START+TIME+DATA
     10+068+NELS+EMITTER+CEP+DATA := 0.5
      #D+160+NELS+EMITTER+ID+DATA := D+160+NELS+EMITTFR+ID+DATA;
        D+162+NELS+EMITTER+X+DATA :=
         D+162+NELS+EMITTER+X+DATA;
        D+163+NELS+FMITTER+Y+DATA :=
        D+163+NELS+EMITTER+Y+DATA;
        D+164+NELS+FMITTER+Z+DATA :=
        P+164+NELS+EMITTFR+Z+DATA:
     D+165+SCENARIO+GEN+ID+NUM+DATA 1=
        D+165+SCENARIO+GEN+TD+NUM+DATA
      IDREAL IS U+058+NFLS+DD+1+2+DATA
      IDREAL IS D+018+ASP+PITCH+DATA
      IDREAL I= 0+010+ASP+ALTITUDE+DATA
     IDREAL IS DE014+ASP+LOC+X+DATA
   END ENDFOREACH
 END:".
    DATE+ENTERED: 11282.
    DESCRIPTION:
             TEMITTER LOCATION ACCUPACY WILL BE MODELLED AS A
  FUNCTION OF EMITTER FREQUENCY, BANDWIDTH, S/N, HARDWARE ERROPS,
   NAVIGATIONAL ERRORS, SENSOR PLATFORM GEOMETRY, PHASE NOISE AND
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CO-CHANNEL INTERFERENCE, AND CORRELATION DWELL TIMES!
THE COARSE LOCATION FUNCTION DETERMINES THE APPROXIMATE
 LOCATION OF THE ACTIVE NARPOWBAND EMITTEPS IN THE TUNED FREQUENCY
  WAND IN THE GEUGRAPHICAL ANI!
AN (X,Y) LOCATION ERROR COVARIANCE MATRIX IS CALCULATED
  AND USED TO GENERATE RANDOM (X,Y) ERRORS IN COARSE LOCATION,
  WHICH IN TURN ARE USED TO GENERATE AN ESTIMATE OF THE CIRCULAR
  ERPOR PROBABLE (CEP) ".
    ENTERED+RY: "JJF-NFLS".
    GAMMA :
      "VAR SSTEMPR : REAL
  BEGIN
     SSTEMPR 1= D+018+ASP+PITCH+DATA
     ISSTEMPR := D+010+ASP+ALTITUDE+DATA
     :SSTEMPR := D+014+ASP+LOC+X+DATA
     ISELECT FIRST RECORD FROM
             F+24+HELS+TDOA+DO+FILE
     155TEMPR := 0+058+NFL3+D0+1+2+DATA
     SELECT FIRST RECORD FROM
             F+17+NELS+ESTIMATFD+EMITTER+PARAMETERS+FILE
     ; SELECT FIRST RECORD FROM
             F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
     INHILE FOUND DO BEGIN
       CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FTLF RECORD
       ISSTEMPR IN DAIS9-NELS-FMITTER-FREQUENCY-RANDWIDTH-DATA
       ID+157+NELS+EMISSTON+DURATION+DATA :=
          D+157+MELS+EMISSION+CURATION+DATA
       :D+158+NELS+EMISSION+START+TIME+DATA :=
          D+158+NEL S+EMISSION+START+TIME+DATA
       ID+068+NELS+EMITTFR+CEP+DATA := 0.0
       #P+160+NELS+EMITTFR+ID+DATA :=
          D+160+NELS+EMITTER+ID+DATA;
       D+162+NELS+FMITTER+X+PATA :=
         D+162+NELS+EMITTER+X+DATA;
       D+163+NFLS+FMITTER+Y+DATA :=
        D+163+NELS+EMITTER+Y+DATA:
       D+164+NELS+FMITTER+Z+DATA :=
        D+164+NELS+EMITTER+Z+DATA
       ID+165+SCENARTO+GEN+ID+NUM+DATA :=
          D+165+SCENARIO+GEN+ID+NUM+DATA
       SELECT NEXT RECORD FROM
          F+17+NELS+ESTIMATED+EMITTER+PARAMETEPS+FILF
       SELECT NEXT PECORD FROM
          F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
    END (* WHILE *)
   END;"
    INPUTS:
         FILE:
               F+17+NFLS+ESTIMATED+EMTTTER+PARAMETERS+FILE
         FILE
               F+18+NELS+ESTIMATED+GROUND+TRUTH+FTLE
         FILE:
               F+24+NELS+TODA+DD+FILE.
    OUTPUTS:
               F+18+NELS+ESTIMATED+GROUND+TRUTH+FILF.
         FILE:
    TRACED FROM:
         URIGINATING+REQUIPEMENT:
         ORIG+REQ+EMITTER+LOCATION+ACCURACY
         ORIGINATING+REGUIREMENT:
         UPIG+REQ+MELS+COARSF+AND+FINE+LOCATION.
    PEFERHED BY:
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Page 35 21-MAP-1983 17:14 SUBNET: S+3+MONEL+NELS+GPS+PROCESSING+SUB. ALPHA: A+07+NELS+FINF+1 OCATION+ALPHA. BETA: "VAR PREAL : REAL ; REGIN FOR EACH F+17+NFLS+ESTIMATED+EMITTER+PAPAMETERS+FILE RECORD DO BEGIN CREATE F+17+NFLS+ESTIMATER+EMITTER+PARAMETERS+FILE RECORD ID+159+MELS+EMITTER+FREQUENCY+BANDWIDTH+DATAIR D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA: D+077+NELS+EMITTER+MODULATION+TYPE+DATA := D+077+NELS+EMITTFR+MODULATION+TYPE+DATA : D+078+NELS+EMITTER+POWFR+LEVEL+DATA := D+078+NELS+EMITTER+POWER+LEVEL+DATA ; D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA := D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA END ENDFOREACH IDREAL := D+018+ASP+PITCH+DATA IPREAL IS U+010+ASP+ALTITUDE+DATA IDREAL I= D+014+ASP+LOC+X+DATA FOR FACH F+13+NELS+EMISSION+THREAT+TABLE+FILE RECORD DO DREAL := D+057+NELS+EMITTER+BANDWIDTH+DATA ENDFOREACH FOR FACH F+1P+NELS+ESTIMATED+GROUND+TRUTH+FILE RECORD DO BEGIN CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE RECORD : D+157+NELS+EMISSION+DURATION+DATA := D+157+NELS+EMISSION+DURATION+DATA IN+158+NELS+EMISSION+START+TIME+DATA := D+158+NELS+EMISSION+START+TIME+DATA JD+068+NELS+EMITTER+CEP+DATA := 0+068+NELS+EMITTER+CEP+DATA ; D+070+ YELS+EMITTER+CCV+DATA := 0.5 ID+16C+NELS+EMITTER+ID+DATA IF D+160+NELS+EMTTTEF+ID+DATA :D+162+NELS+FMITTER+X+DATA := D+162+NELS+EMITTER+X+DATA: D+163+NELS+FMITTER+Y+DATA := D+163+NELS+EMITTEP+Y+PATA ; D+164+NELS+EMITTER+Z+PATA 1= D+164+NELS+EMITTER+Z+CATA : D+165+SCENARIO+GEN+ID+NUM+DATA := D+165+SCENARIC+GEN+ID+NUM+DATA END ENDFOREACH END:". DATE+ENTERED: 11282. DESCRIPTION: THE FINE LOCATION FUNCTION IS AN ITERATIVE PROCESS IN WHICH THE CORRELATION TIME IS INCREMENTED UNTIL THE ...

RESULTING CEP LOCATION ESTIMATE IS BELOW A SET THRESHOLD, OR UNTIL THE TRANSMISSION ENDS, WHICHEVER COMES FIRST".

ENTERED+RY: "JJF-NELS".

GAMMAI

TVAR SSTEMPR : RFAI

1BEGIN

SSTEMPR := D+018+ASP+PTTCH+DATA :SSTEMPR := D+010+ASP+ALTITUDE+DATA SSTEMPR := D+014+ASP+LOC+X+DATA

```
SELECT FIRST RECORD FROM
            F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE
    ISELECT FIRST RECORD FROM
            F+13+NELS+EMISSION+THREAT+TARLE+FILE
    SELECT FIRST PECORD
            F+17+NFLS+ESTIMATEC+EMITTER+PARAMETERS+FILE
    * WHILE FOUND DO BEGIN
      CREATE F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD;
     D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA1=
        D+159+NELS+EMITTER+FREGUENCY+BANDWIDTH+DATA;
      D+077+NELS+EMITTER+MODULATION+TYPE+DATA :=
        D+077+NELS+EMITTFR+MCDULATION+TYPE+DATA :
      D+07A+NELS+EMITTER+POAFR+LEVEL+DATA :=
        P+078+NELS+EMITTFR+PCWER+LEVFL+DATA ;
      D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
       :CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE RECORD
       :0+157+NELS+EMISSION+DURATION+DATA :=
         D+157+NELS+FMISSION+DURATION+DATA
       :0+158+NELS+FMISSION+START+TIME+DATA :=
         D+158+NELS+EMISSION+START+TIME+DATA
       :D+068+NELS+EMITTER+CEP+CATA :=
         D+068+NELS+EMITTER+CEP+DATA
       : D+070+NELS+EMITTER+COV+DATA := 0.0
       :D+160+NELS+FMITTER+ID+DATA :=
         D+160+NELS+EMITTER+ID+DATA
       :D+162+NEL5+EMITTER+X+PATA :=
         U+162+NELS+FHTTTER+X+DATA;
       D+163+NELS+FMITTEP+Y+DATA :=
          D+163+NELS+EMITTER+Y+CATA ;
       D+164+NELS+EMITTER+7+DATA :=
         D+164+NELS+EMITTER+7+PATA
       :D+165+SCENARIO+GEN+ID+NUM+DATA :=
         D+165+SCENARIO+GFN+ID+NUM+DATA
       :SSTEMPR :=0+079+NFLS+EMITTER+TIME+UF+LOCATION+DATA
    END (* MHILE *)
    END:".
    INPUTS:
          DATA:
                 D+011+ASP+ATTITUDE+DATA
         UATA:
                D+013+ASP+LOCATION+DATA
         DATA:
                 P+020+ASP+STATE+VECTOR+DATA
         FILE:
                F+13+NELS+EMISSION+THREAT+TABLE+FILE
         FILE:
                F+17+NELS+ESTIMATED+FMITTER+PARAMETERS+FILE
         FILE:
                F+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE.
    CUTPUTS:
          FILE
                F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
                F+18+NELS+ESTIMATED+GROUND+TPUTH+FILE.
         FILE:
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          OPIG+REN+FMITTER+LUCATION+ACCURACY
          UPIGINATING+REQUIREMENT:
          OPIG+FEG+MELS+CHARSE+AND+FINE+LOCATION.
     REFERRED BY:
                  S+3+MODEL+HELS+GPS+PRUCESSING+SUR.
          SUBNET:
ALPHA: A+OR+NELS+FPEQUENCY+SCAN+OPTIMIZATION+ALPHA.
    PETA:
      "PEGIN
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FOR EACH F+17+NELS+FSTIMATED+FMTTTER+PARAMETERS+FILE RECORD DO
          D+091+NELS+FREQUENCY+SCAN+DATA :=
            D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
       ENDFOREACH
   END . "
       DATE+ENTERED: 11282.
       DESCRIPTION:
               *FREQUENCY SCAN STRATEGY WILL BE AUTOMATICALLY
     OPTIMIZED SASED UPON THE DETECTION OF HIGH PRIORITY THREAT
     EMITTERS;
               THE DETECTION OF AN EMITTER WHICH EXHIBITS A
     SPECIFIC TRAFFIC TYPE COULD CAUSE THE FREQUENCY SCAN
     STARTEGY TO BE UPDATED, SO THAT THE FREQUENCY AT WHICH THE
     EMITTER IS OPERATING ON WOULD BE SCANNED MORE OFTENM.
       ENTEREDORY: "JJF-NELS".
       GAMMA:
          "BECIN
      D+091+NFLS+FREUHENCY+SCAN+DATA := D+091+NFLS+FREUHENCY+SCAN+DATA
      FOR EACH F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD DO
        D+U91+NELS+FREGUENCY+SCAN+DATA :=
        D+161+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA
      ENOFOREACH
   END; ".
       INPUTS:
            DATA:
                   De091+MELS+FPEQUENCY+SCAN+DATA
            FILE: F+17+NELS+ESTIMATED+EMITTEP+PARAMETERS+FILF.
       CUTPUIS:
            DATA: P+091+NELS+FREGUENCY+SCAN+PATA.
       THACED FROM:
            UPIGINATING+REQUIREMENT: ORIG+REQ+MELS+SCAM+CPTIMIZATION.
       PEFERFED AY:
            SUBNET:
                     S+3+MODEL+HEL5+GPS+PROCESSING+SUR.
  ALPHA: A+09+NELS+MAKE+SEMSOR+REQUESTS+ALPHA.
       PETA:
       "BEGIN
       D+005+ASET+MSG+SOURCE+DATA := NELS
      ID+004+ASET+MSG+NAME+DATA I= MN+10+MELS+SENSOP+PEQUESTS
      IN+002+ASFT+MSG+DEST+NATA IT ASE
      10+125+REG+DESTINATION+SEMSOR+IO+DATA 1# GPS+MELS+1
      ID+126+REG+REPORT+INFORMATION+TYPE+DATA I= EE6JNKNHNVAL
      ID+127+PEC+SENSOR+TARGET+IO+OF+INTEREST+DATA := EF6HNKNWNVAL
      ID+135+SENSOR+ID+DATA I= NELS+GPS+1
   END;".
       DATE+ENTERED: 11482.
       DESCRIPTION: "PEQUEST TO ASE FOR TASKS".
       ENTERED+RY: "JJF+NFLS".
       GAMMA :
        *PEGIN
   D+005+ASET+MSG+SOURCE+DATA 1# NELS
   ID+004+ASET+MSG+NAME+DATA := MK+10+NELS+SENSOK+RFWHESTS
   10+002+ASET+MSG+DEST+DATA := ASE
   :D+125+REU+DFSTIVATION+SENSOP+ID+DATA := GPS+NELS+1
   10+126+RED+REPORT+INFORMATION+TYPE+DATA := EF6UNKNWNVAL
   104127+REG4SENSOR+TARGET+ID+PF+INTEREST+DATA := FE6UNKNWNVAL
   JU-135+SENSOP+TU+DATA := NELS+GPS+1
END . .
       FURMS:
            MESSAGE: M+10+NELS+SENSOR+REQUESTS+MSG+0UT.
```

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OUTPUTS:
          DATAS
                 D+003+ASFT+MSG+ID+DATA
         DATAL
                 9+125+REQ+DESTINATION+SENSOR+ID+DATA
         DATA:
                 D+126+REQ+REPORT+INFORMATION+TYPE+DATA
         DATAS
                 D+127+REQ+SENSOR+TARGET+ID+OF+INTEREST+DATA
         DATAL
                 D+135+SEMSOR+ID+DATA.
    TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+RED+NELS+EXTERNAL+INTERFACE.
    REFERRED BY:
          R+NET: R+2+MODEL+NELS+SENSOR+SYSTEM+P+NET.
       A+10+NELS+MODIFY+ORBIT+ALPHA.
AL PHA:
    RETAI
           "VAR DREAL : REAL
  :PEGIN
    IF D+135+SEMSQR+ID+DATA IN
      [NELS+GPS+1, NFLS+GPS+2, NELS+GPS+3] THEN BEGIN
      FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
        OPEAL IS D+041+FLIGHT+WAYPOINT+X+DATA ENDFOREACH
      FOR EACH F+32+SENSOR( @RBIT+MODS+FILE RECORD DO BEGIN
        CREATE F+06+FLIGHT+FROFILE+FILE RECORD
         10+041+FLIGHT+NAYPOINT+X+UATA 18
            D+117+PLATFORM+MOD+X+DATA
          10+042+FLIGHT+WAYPOINT+Y+DATA 1=
            D+118+PLATFORM+MOD+Y+DATA
          ID+043+FLIGHT+WAYPUINT+Z+DATA IZ
            D+119+PLATFORM+MOD+Z+DATA
     END ENDFOREACH
   END
 ENU1"
    DATE+ENTERED: 114H2.
    DESCRIPTION: "MUDIFICATIONS TO FLIGHT PROFILE".
    ENTERED+RY: "JJF-NFLS".
    GAMMAT
        TVAR SSTEMP : EFOD+135+SENSOR+ID+DATA
    JREGIN.
      SSTEMP := D+135+SENSOR+ID+DATA
      FOR EACH F+32+SENSOR+ORBIT+MODS+FILE RECORP OU BEGIN
        CREATE F+06+FLIGHT+PROFILE+FILE RECORD
        ID+041+FLIGHT+WAYPOINT+X+DATA IN D+117+PLATFURM+MOD+X+DATA
        ID+042+FLIGH(+WAYPOINT+Y+DATA := D+11R+PLATFCPM+MOD+Y+DATA
        ID+043+FLIGHT+WAYPOINT+Z+DATA II D+119+PLATFURM+MNU+Z+DATA
      END ENDFOREACH
    ENU . " .
     INPUTS:
          DATA: D+135+SENSOR+IC+DATA
                F+06+FLIGHT+PROFILE+FILE
          FILE:
          FILE: F+32+SENSOR+ORPIT+MODS+FILE.
    PUTPUTS:
          FILE: F+06+FLIGHT+PRCFTLE+FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
    REFERRED BY:
          RONET: ROZOMODELONELSOSENSOROSYSTEMORONET.
AL PHA:
       A+11+NELS+MODIFY+TASK+ALPHA.
    HETA:
```

"VAR I : INTEGER

```
DREAL : REAL
, BEGIN
 IF 0+056+NEEDED+FEASIBLE+DATA IN [SOI, AUI, BUTH] THEN BEGIN
   D+139+TASK+QUE+ID+DATA 12 C+139+TASK+QUE+ID+DATA
    JD+141+TIME+DATA IN D+141+TIME+DATA
    :D+138+TASKING+RESPONSE+DATA := CAN+DO
    :D+005+ASET+MSG+SOURCE+DATA := NFLS
    10+004+ASET+MSG+NAME+DATA 1= MN+13+NELS+TASKING+PESPONSES
    1D+002+ASET+MSG+DEST+DATA := ASE
    FOR EACH F+06+FLIGHT+PROFILE+FILE RECORD DU
     DREAL I= D+041+FLIGHT+WAYPOINT+X+DAT: FNDFOREACH
    *CREATE F+06+FLIGHT+PROFILE+FILE RECORD
      10+041+FLIGHT+WAYPOINT+X+DATA := D+143+X+LOC+FEASIBLE+DATA
      :D+042+FLIGHT+WAYPOINT+Y+CATA := U+145+Y+LOC+FEASIALF+DATA
      ;D+043+FLIGHT+WAYPOINT+Z+DATA := 0.0
   END
 END:"
   DATE+ENTERED: 11482.
   DESCRIPTION:
            *MODIFIES FLIGHT PPOFILE TO ALLOW, IF PUSSIBLE,
 CHANGES IN CURRENT OPERATIONS/LUCATION: WHATEVER THE
 DECISION, A RESPONSE IS SENT TO ASE VIA TAC".
   ENTEREDORY: "JJF-NELS".
   GAMMAI
       TVAR SSTEMP : EEOD+056+NEEDED+FEASIBLE+DATA
  IREGIN
     SSTEMP := D+056+NFEDED+FEASTBLE+DATA
     ID+139+TASK+QUE+ID+DATA I= D+139+TASK+QUE+ID+DATA
     IN+141+TIME+DATA := D+141+TIME+DATA
     IN+138+TASKING+RESPONSE+DATA := CAN+DO
     FOR EACH F+05+FEASIBLE+ACTIVITY+AREA+FILE PECOPD DO REGIN
      SELECT NEXT RECORD FROM
              F+06+FLIGHT+PROFTLE+FILE
      IT RECORD+FOUND THEN BEGIN
         IF SQRT(SQR(U+041+FLIGHT+WAYPOINT+X+DATA -
                     D+143+X+LOC+FEASIBLE+DATA) +
                 SOR(D+042+FLIGHT+WAYPDINT+Y+DATA -
                     D+145+Y+LCC+FEASIBLE+DATA))
                <= 3.2E4 THEN REGIN
           D+041+FLIGHT+WAYPOINT+X+DATA 1=
             D+143+X+LOC+FEASIBLE+DATA
           #D+042+FLIGHT+WAYPDINT+Y+DATA #=
             D+145+Y+LOC+FEASIBLE+DATA
           ID+043+FLIGHT+WAYPUINT+Z+DATA IT 0.0
         END
        ELSE 0+138+TASKING+PESPONSE+DATA := CANT+DU
      ENO
       ELSE (* NO RECORD FOUND *) REGIN
         CREATE F+06+FLIGHT+PRCFILE+FILE RECORD
         ID+041+FLIGHT+WAYPOINT+X+DATA IR
           D+143+X+LOC+FEASIBLE+DATA
         ID+042+FLIGHT+WAYPOINT+Y+DATA IN
          D+145+Y+LOC+FFASIBLE+DATA
         #D+043+FLIGHT+WAYPOINT+Z+DATA #= 0.0
      END
     END ENDFOREACH
     10+005+ASET+MSG+SOURCE+DATA 12 NELS
     ID+004+ASET+MSG+NAMF+DATA IN MN+13+NELS+TASKING+RESPONSES
```

```
ID+002+ASET+MSG+DEST+DATA IM ASE
   END;".
     FORMS:
          MESSAGE: M+13+NELS+TASKING+RESPONSES+MSG+OUT.
     INPUTS:
          DATAS
                D+056+NEFDFD+FEASIPLE+DATA
          DATAS
                 D+139+TASK+QUE+ID+DATA
          DATA:
                 D+141+TIME+DATA
                 F+05+FEASIBLE+ACTIVITY+AREA+FILE
          FILE:
                F+06+FLIGHT+PRCFILE+FILE.
          FILE:
     OUTPUTS:
          DATAS
                D+003+ASET+MSG+ID+DATA
                 D-13R-TASKING+RESPONSE+DATA
          DATAS
                 D+139+TASK+QUE+ID+DATA
          DATA:
          DATAS
                 D+141+TIME+DATA
         FILE: F+06+FLIGHT+PROFILE+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REQ+NELS+EXTERNAL+INTERFACE.
     PEFERRED BY:
          RENET: REZEMODELENELSESSENSORESYSTEMERENET.
ALPHA:
       A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA.
    PETAL
            "BEGIN
     SELECT FIRST RECORD FROM
           F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
     *SELECT FIRST RECORD FROM
             F+18+NELS+ESTIMATEC+GROUND+TRUTH+FILE
     : CPEATE F+25+NFLS+TYPED+FMITTER+PEPORT+FILE RECORD
       ;D+1764NELS+EMITTER+BANDWIDTH+DATA :=
         D+159+NELS+EMITTER+FREQUENCY+BANDWIDIH+DATA
       ;D+177+NELS+FMITTER+CEP+DATA := D+068+NELS+EMITTER+CEP+DATA
       :D+070+NELS+FMITTER+COV+DATA := D+070+NELS+EMITTER+COV+DATA
       :D+074+NELS+EMITTER+FREQUENCY+DATA := ...
         D+161+NELS+EMITTFR+TRANSMISSION+FREUUENCY+DATA
       ID+166+NELS+EMITTEP+ID+DATA := D+160+NFLS+EMITTER+ID+DATA
       :D+167+NELS+EMITTER+X+DATA :=
          D+162+NELS+FMITTER+X+PATA;
        D+168+NFLS+FMITTER+Y+DATA :=
          D+163+NELS+EMITTER+Y+DATA ;
        D+169+NELS+FMITTER+Z+DATA :=
          D+164+NELS+EMITTER+Z+DATA :
       D+178+NELS+EMITTER+MODULATION+TYPE+DATA :=
         D+077+NELS+EMITTER+MODULATION+TYPE+DATA
       :D+179+NELS+FMITTER+TIME+OF+LOCATION+DATA :=
         D+063+NELS+EMISSION+START+TIME+DATA
       :D+180+NELS+EMITTEP+TRAFFIC+TYPE+DATA := POTFNTIAL+THREAT
       :D+170+SCEMARIO+GEN+ID+NUM+DATA :=
        D+165+SCENARIO+GFN+ID+NUM+DATA
     END; "
     DATE+ENTERED: 11282.
     DESCRIPTION:
             *A TRAFFIC TYPE CODE WILL BE GIVEN TO EACH
   NAPROWBAND EMISSION RASED ON ITS SIGNAL CHARACTERISTICS:
   FREQUENCY, BANDWIDTH, MODULATION, AND EFFECTIVE RADIATED
   POWER".
     ENTERED+BY: "JJF+NELS".
     GAMMA:
```

```
"VAR SSRAND : REAL
:FUNCTION SSRANDU : RFAL
  * PEGIN
    SSRAND := 29.0 * SSRAND + 357.0
    :SSPAND := SSRAND - TPURC(SSRAND)
    ISSPANDU IE SSRAND
 END
SAEGIN
  SSRAND := 0.65832
  ISELECT FIRST RECORD FROM
          F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
  ISELECT FIRST RECORD FROM
          F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
  :WHILE FOUND DO BEGIN
    CREATE F+25+NELS+TYPED+EMITTER+REPORT+FILE PECORD
    :D+176+NELS+EMITTER+BANDWIDTH+DATA :=
      D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
    ID+177+NELS+EMITTER+CEP+DATA IS
      0+068+NELS+EMITTER+CEP+DATA
    ID+070+NELS+EMITTFR+COV+DATA :=
      D+070+NELS+EMITTER+COV+DATA
    ID+074+NELS+EMITTER+FPEGUENCY+DATA 12
      D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
    :D+166+NELS+EMITTER+ID+DATA 1=
      D+160+NELS+EMITTER+ID+DATA
    ID+167+NELS+EMITTER+X+DATA :=
       D+162+NELS+EMITTER+X+D4TA:
     D+168+NELS+EMITTER+Y+DATA :=
       D+163+NELS+EMITTER+Y+DATA :
     D+169+NELS+EMITTER+Z+DATA :=
       D+164+NELS+EMITTER+Z+DATA :
     D+17#+NELS+EMITTER+MODULATION+TYPE+DATA :=
      D+077+NELS+EMITTER+MODULATION+TYPE+DATA
    10+179+NELS+EMITTER+TIME+OF+LOCATION+DATA 12
      D+063+NELS+EMISSION+STAPT+TIME+DATA
    :D+170+SCENARIO+GEN+ID+NUM+DATA :=
      D+165+SCENARIO+GEN+ID+NUM+DATA
    ISSRAND IF SSRANDU
    ; IF SSRAND <= 1.0 /3.0 THEN
      D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA := PASSIVE
    ELSE IF SSRAND >= 2.0 / 3.0 THEN
      D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA 12
        POTENTIAL+THREAT
    ELSF D+180+NELS+EMITTFR+TPAFFIC+TYPF+DATA := THREAT
    ISELECT NEXT RECORD FROM
            F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
    SELECT NEXT RECORD FROM
            F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE
    END (* WHILE *)
  EPD:".
 INPUTS:
            F+174NELS+ESTIMATED+EMITTER+PAPAMETERS+FILE
      FILF:
      FILE:
            F+18+NFLS+FSTIMATED+GROUND+TRUTH+FILE.
 DUTPUTS:
      FILE: F+25+NELS+TYPED+EMITTER+REPORT+FILE.
 THACED FROM:
      OPIGINATING+REGUIREMENT: ORIG+REC+NELS+STGNATURE+ANALYSIS.
 REFERRED BY:
```

END:".

DATE - ENTEREDE 114H2.

DESCRIPTION:

```
SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR.
ALPHA:
       A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA.
     RETAI
     "VAR DREAL : REAL
  I PEGIN
    CREATE F+33+SENSOR+PLATFORM+LOCATION+FILE RFCORD
      IN+114+PLATFORM+LOCATION+X+DATA := D+014+ASP+LUC+X+DATA
      :D+115+PLATFURM+LOCATION+Y+DATA := D+015+ASP+LOC+Y+DATA
      IN+116+PLATFORM+LOCATION+7+DATA I= N+016+ASP+LUC+7+DATA
      ID+005+ASET+MSG+SOURCE+DATA := NELS
      ID+004+ASET+MSG+NAMF+DATA :=
        MN+07+NFLS+PLATFORM+LOCATION+FEPORTS
      ID+002+ASEI+MSG+UFST+DATA := ASE
  END;".
     DATE+ENTFRED: 11882.
     DESCRIPTION: "TO INFORM THE ASE FLEMENT OF SENSUR LUCATION".
     ENTERED+HY: "JJF-NELS".
     GAMMAI
      "REGIN
  D+005+45ET+MSG+SOURCE+DATA := NELS
  ID+004+ASET+MSG+NAME+DATA := MN+07+NELS+PLATFORM+LUCATION+REPORTS
  ID+002+ASFT+MSG+DEST+DATA := ASF
  CREATE F+33+SEMSOR+PLATFORM+LOCATION+FILE RECOPD
  ID+114+PLATFURM+LOCATTOM+X+DATA := D+014+ASP+LUC+X+DATA
  ID+115+PLATFORM+LOCATTOH+Y+DATA := D+015+A5P+LOC+Y+DATA
  #D+116+PLATFORM+LOCATION+Z+PATA := D+016+ASP+LOC+Z+DATA
ENDI".
          MESSAGE: M+07+NELS+PLATFORM+1 OCATION+REPORTS+MSG+UHT.
     INPUTS:
          DATA:
                P+020+ASP+STATE+VECTOR+UATA.
     OUTPUTS!
                DenustasFT+MSG+ID+DATA
          DATAS
          FILE:
                 F+33+SFNSOR+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIGHPECHNELS+EXTERNAL+INTERFACE.
     PEFEPHFU BY:
          SUBMET:
                  S+2+PU+NELS+CPERATIONAL+CONTROL+SUB.
       A+14+NELS+PROCESS+COMMANDERS+REQUIREMENTS+ALPHA.
     RETA:
           "VAR DREAL : REAL
  JHEGIN
    IF (D+040+FIRST+CMDRS+REQ+UPDATE+DATA = IN+AREA) OR
       (D+040+FIRST+CMDRS+REQ+UPDATE+DATA = UUTSIDE+AREA) UR
       (D+133+SECOND+CMDRS+RED+UPDATE+DATA = IS+MODULATED) OR
       (D+133+SECOND+CMDRS+REQ+UPDATE+DATA = IS+NOT+MODILATED)
       THEN DREAL := 0.0
    IFUR FACH F+20+NELS+PPE+BRIEFED+ACI+FILE RECOPD DO
      D+097+NFLS+PRF+BRIEFED+ADI+LOWER+LEFT+X+DATA :=
        D+097+NFLS+PRE+PRTEFED+A01+LOWER+LEFT+X+DATA ENDFOREACH
    IFOR EACH F+21+NELS+PRE+BRIEFED+SOI+FILF RECOPD DO
      D+103+NFLS+PRF+BRIEFED+SUI+FND+FREU+DATA :=
        D+103+NELS+PRE+RRIEFED+SQI+END+FREQ+DATA ENDEGREACH
```

. 1

```
"UPDATES PLANNING INFORMATION TO DIRECT NELS
  OPERATIONS (PLATFORM MISSION ORJECTIVES, INITIAL SOI/ANI
  REDUIREMENTS, AND PROCESSING PRIORITIES)
    ENTERED+BY: "JJF-NELS".
    GAMMAI
     TVAR SSTEMP040 : EEOD+040+FIRST+CMDRS+REG+UPDATE+DATA
           ISSTEMP133 : EEOD+133+SECOND+CMORS+REQ+UPDATE+DATA
 : PEGIN
   FAD EACH F+04+CMDRS+DATA+TO+UPDATE+FILE RECORD DO BEGIN
      .STEMP040 := 0+040+FIRST+CMDRS+REQ+UPDATE+DATA
      ISSTEMP133 IT D+133+SECOND+CMDRS+REQ+UPDATE+DATA
   END ENDFOREACH
    FOR EACH F+20+NELS+PRE+BRIEFED+A0I+FILE RECORD DO
     D+094+NELS+PRE+RRIEFED+ADI+DATA :=
       D+094+NELS+PRE+RRIEFED+401+DATA ENDFOREACH
    FOR EACH F+21+NELS+PRE+BRIEFED+SOI+FILE RECORD DO
     D+102+NELS+PRE+PRIEFED+SOI+DATA :=
       D+102+NELS+PRE+HRIEFED+SOI+DATA ENDFUPEACH
 END: ".
    INPUTS:
         FILF: F+04+CMDRS+DATA+TO+UPDATE+FILE
          FILE: F+20+NELS+PRE+PRIEFED+A0I+FILE
         FILE: F+21+NELS+PRE+PRIEFED+SUI+FILE.
    OUTPUTS:
         FILE: F+20+NELS+PRE+BRIEFED+A01+FILE
         FILE: F+21+NELS+PRF+RRIEFED+SOI+FILE.
    TRACED FROM:
         ORIGINATING+REGUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
    PEFERRED BY:
          R+NET: R+2+MODFL+NFLS+SENSOR+SYSTEM+R+NET.
ALPHAS
      - A+15+NELS+PROCESS+PRIDKITTZED+SENSUR+DIRECTTONS+ALPHA.
    RETA:
           MVAR I : INTEGED
         IDREAL : REAL
 IPEGIN
    IF ((D+056+NEEDED+FEASIRLE+DATA = SOI) OR
        (D+056+NEEDFD+FEASIPLE+PATA = AOI) OR
        (D+056+NEEDFU+FEASIBLE+DATA # BOTH)) AND
       ((D+135+SENSOR+IP+DATA = NELS+GPS+1) UR
        (D+135+SEMSOR+ID+DATA = NELS+GPS+3) UR
        (D+135+SEMSOR+ID+DATA = NFLS+GPS+3))
        THEN DREAL IS 0.0
    II IR O+137+SENSUR+PRIORITY+DATA
    ISELECT FIRST RECORD FROM
           F+05+FEASIBLE+ACTIVITY+AREA+FILE
    IDREAL 1= 0+143+X+LOC+FEASIPLE+DATA
    FOR EACH F419+NELS+FREQUENCY+SCAN+FILE RECORM DO BEGIN
      D+092+NELS+FREU+SCAN+LOWER+FREU+DATA :=
        D+092+NELS+FREQ+SCAN+LOWER+FREQ+DATA;
      D+093+NELS+FRF3+SCAN+UPPER+FRFU+DATA 12
       D+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA END ENDFOREACH
 END . " .
    DATE+ENTERED: 11482.
    DESCRIPTION: "UPDATES SENSOR PRIORITIES".
    FNTERED+RY: "JJF-NFLS".
    GAMMAI
      MVAR SSTEMPI : INTEGER
```

```
ISSTEMPR I REAL
           ; SSTEMP056 : EEOD+056+NEEDED+FEASIBLE+DATA
           ISSTEMP135 : EFOD+135+SENSOR+ID+DATA
  JHEGIN
    SSTEMPOS6 12 De056+NEFDED+FEASIBLE+DATA
    JSSTEMP135 4= D+135+SFNSOR+ID+DATA
    #SSTEMPI #= D+137+SENSOR+PRIORITY+DATA
    FOR EACH F+05+FEASIBLE+ACTIVITY+AREA+FILE RECORD ON REGIN
      SSTEMPR := D+143+X+LOC+FEASTHLE+DATA
      :SSTEMPR := D+145+Y+LOC+FEASIBLE+DATA
    END ENDFOREACH
    #FOR EACH F+19+NELS+FREQUENCY+SCAN+FILE RECORD DO BEGIN
      D+092+NELS+FRFQ+SCAN+LOWER+FREQ+DATA :=
        D+092+NELS+FREU+SCAN+LOKEP+FREG+DATA
      ID+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA :=
        D+093+NELS+FREQ+SCAN+UPPER+FREQ+DATA
   END ENDFOREACH
 END,".
     INPUTS:
          DATAL
                 D+056+NEFDED+FEASIBLE+DATA
          SATAS
                 D+135+SENSOR+ID+DATA
          DATAL
                 D+137+SENSOR+PRIORITY+DATA
          FILE:
                 F+05+FEASIBLF+ACTIVITY+AREA+FILE
          FILE:
                F+19+NELS+FRFDLENCY+SCAN+FILE.
    OUTPUTS:
          FILE: F+19+NFLS+FREQUENCY+SCAN+FILF.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
     PEFERRED BY:
          RENET: REZEMODELENELSESENSORESYSTEMEDENET.
ALPHA: A+16+NELS+PPOCESS+REQUESTED+DATA+ALPHA.
     RETA:
     "VAR DREAL : REAL
  JAEGIN
    IF D+045+GPS+TO+DATA IN [GPS+1+NELS, GPS+2+NFLS, GPS+3+NELS]
    THEN DREAL := 0.0
    FOR EACH F+07+GROUP+TARGET+LOCS+FILE RECORD DO
      DREAL IT D+048+GROUND+TARGET+LOC+X+DATA ENDFUREACH
    FOR EACH F+06+FLIGHT+PROFILE+FTLE PECORD DO
      D+041+FLIGHT+WAYPOINT+X+DATA :=
        D+041+FLIGHT+HAYPOINT+X+DATA FNDFORFACH
 END;".
     DATE+ENTERED: 11482.
     PESCRIPTION:
             "UPDATES FLIGHT PROFILE FILE WHEN TARGET LOCATIONS
   ARE SENT FROM ASE (INFORMATION REGUESTED BY SENSOR)".
     FNTERED+RY: "JJF=NELS".
     GAMMAI
        "LAREL 1
         IVAR SSTEMPO45 : EFOD+045+GPS+ID+DATA
              :SSCLOSE : BUDLEAN (* ARE THE THO POINTS CLOSE? *)
    1REGIN
      SSTEMPO45 := D+045+GPS+ID+DATA
      SELECT FIRST RECORD FROM
              F+07+GROUP+TAPGET+LOCS+FILE
      ISSCLOSE I= FALSE
      IWHILE FOUND DO BEGIN
```

```
(* CHECK IF POINT IN FO7 TS CLOSE TO ANYTHING IN FO6 *)
       ISELECT FIRST RECORD FROM
                F+OA+FLIGHT+PPOFILE+FILE
        WHILE FOUND DO BEGIN
         IF SQRT(SQR(D+041+FLIGHT+WAYPOINT+X+DATA =
                      D+048+GFOUND+TARGET+LOC+X+DATA) +
                  SOR(D+042+FLIGHT+WAYPOINT+Y+DATA =
                      D+049+GRUUND+TARGET+LOC+Y+DATA))
             <= 1.6F4 (+ 10 MILES +) THEN SSCLUSE := TRUE
         : IF SSCLOSE THEM GOTO 1
         ELSE SELECT NEXT RECORD FROM
                      F+04+FLIGHT+PROFILE+FILE
       END (* WHILE *)
        :1: IF SSCLOSE THEN REGIN
          SELECT NEXT RECORD FROM
                 F+07+GRUUP+TARGET+LOCS+FILE
       END
       ELSE BEGIN
         CREATE F+06+FLIGHT+PROFILE+FILE RECORD
          :D+041+FLIGHT+WAYPOINT+X+DATA :=
            D+048+GPOUND+TARGET+LOC+X+DATA
          :D+042+FLIGHT+WAYPOINT+Y+DATA :=
            D+049+GROUND+TARGET+LOC+Y+DATA
          #D+043+FLIGHT+WAYPOINT+Z+DATA #= 0.0
          ISELECT NEXT RECORD FROM
                  F+07+GROUP+TARGET+LOCS+FILE
       END
     END (* WHILE *)
   END . .
    INPUTS:
          DATA: D+045+GPS+ID+DATA
          FILE: F+06+FLIGHT+PRCFILE+FILE
          FILE: F+07+GROHP+TARGET+LOCS+FILE.
    OUTPUTS:
          FILE: F+06+FLIGHT+PRCFILE+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: URIG+REQ+NELS+EXTERNAL+INTERFACE.
    PEFERRED BY:
          RENET: REZEMODELENELSESSORESYSTEMERENET.
ALPHA: A+17+NELS+SENSOR+STATUS+ALPHA.
    BETA:
           "VAR DREAL : REAL
  : PEGIN
    DREAL := D+014+ASP+LOC+X+DATA
    ID+091+NELS+FREQUENCY+SCAN+DATA IR
      D+091+NELS+FREQUENCY+SCAN+DATA
    #FOP EACH F+06+FLIGHT+PROFILE+FILE RECORD DO
      DREAL := D+041+FLIGHT+WAYPOINT+X+DATA ENDFOREACH
    FOR EACH F+20+NELS+PRE+BRIEFFD+ADI+FILE RECORD DO
      DREAL IS DAGGTANELSAPREABRIEFEDAAGIALOWERALEFTAXADATA
    ENDFOREACH
    FOR EACH F+21+NELS+PRE+BRIEFED+SOI+FILE RECORD DO
      DREAL 1=0+103+NELS+PRE+BRIEFED+S0I+END+FRFQ+DATA
   ENDFOREACH
    JCREATE F+34+SENSOR+STATUS+FILE RECORD
     10+044+FREQUENCY+SCAN+PARAMETER+DATA 1# 0.0
      #D+136+SENSOR+MODE+OF+OPERATION+DATA ## SOI+SEARCH
                                   D - 44
```

```
ID+135+SENSUR+ID+DATA IN NELS+GPS+1
      IN+005+ASET+MSG+SOUPCE+DATA := NELS
      ID+004+ASET+MSG+NAME+DATA := MN+11+NELS+SENSOR+SYSTEM+STATUS
     1D+002+ASET+MSG+DEST+DATA 1= ASE
 END,"
    DATE+ENTERED: 11882.
    DESCRIPTION:
             "DETERMINES IF THERE IS ANYTHING FOR THE NELS
  PLATFORMS TO DOM.
    ENTERED+BY: "JJF=NELS".
    GAMMAI
       TVAR SSTEMPR : REAL
  BEGIN
    SSTEMPR := D+014+ASP+LOC+X+DATA
    SELECT FIRST RECORD FROM
             F+06+FLIGHT+PROFILE+FILE
    :SSTEMPR := D+041+FLJGHT+WAYPOINT+X+DATA
    ISFLECT FIRST PECOPO FROM
             F+20+NELS+PRF+BRIEFED+AUI+FILE
    :IF FOUND THEN SSTEMPR :=
      0+097+NELS+PRE+BPIFFED+ACI+LOWER+LEFT+X+DATA
    ISELECT FIRST RECORD FROM
             F+21+NFLS+PRE+BRIEFED+SUI+FILE
    : IF FOUND THEN SSTEMPR :=
      D+103+NELS+PRE+BRIFFED+SCI+END+FREQ+DATA
    ICREATE F+34+SENSOR+STATUS+FILE PECORD
    10+044+FREQUENCY+SCAN+PARAMETER+DATA 1=
      D+091+NELS+FREQUENCY+SCAN+DATA
    1D+135+SENSOR+ID+DATA := NELS+GPS+1
    10+005+ASET+MSG+SOURCE+DATA := NELS
    :D+004+ASET+MSG+NAME+DATA := MN+11+NFLS+SENSOR+SYSTEM+STATUS
    10+002+ASET+MSC+DEST+DATA := ASE
    :D+091+NELS+FREQUENCY+SCAN+DATA :=
       D+091+NELS+FPEQUENCY+SCAN+DATA
    :IF FOF(STAT) THEN D+136+SENSOR+MODE+OF+OPERATION+DATA := IDLE
    ELSE READLN(MSGS.D+136+SFNSOP+MODE+OF+OPERATION+DATA)
  END: ".
    FORMS:
          MESSAGE: M+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT.
    INPUTS:
                 T+020+ASP+STATE+VECTOR+DATA
         DATA:
                 0+091+NELS+FREQUENCY+SCAN+DATA
         DATAS
         FILES
                 F+06+FLIGHT+PRCFILE+FILE
         FILE:
                 F+20+NFLS+PRE+FRIEFED+ADI+FILE
         FILE:
                 F+21+NELS+PRE+9RIEFED+SOI+FILE.
    OUTPUTS:
         DATA:
                 D+003+ASFT+MSG+ID+DATA
                 D+091+NELS+FREGUENCY+SCAN+DATA
         DATA:
         DATAL
                 D+135+SENSOR+ID+DATA
         FILF:
                 F+34+SENSOP+STATUS+FILF.
     TRACED FROM:
          ORIGINATING+REQHIREMENT: ORIG+REQ+NELS+EXTERNAL+INTEPFACE.
    REFERRED BY:
          SUBNET:
                  S+1+CHFCK+NELS+SENSOR+STATUS+SUB.
ALPHA: A+1P+NELS+SIGNAL+OF+INTEREST+FILTFR+ALPHA.
    PETAL
```

"VAR DREAL : DEAL

```
1BFGTN
 DREAL := D+018+ASP+PITCH+DATA
 IDREAL IS D+010+ASP+ALTITURE+DATA
  IDREAL I= D+014+ASP+LOC+X+CATA
  IDREAL I= D+091+NELS+FREQUENCY+SCAN+DATA
  FOR EACH F+21+NELS+PRE+PRIEFED+SOI+FILE RECORD DO
   DREAL := D+103+NFLS+PRE+PRIEFED+SOI+END+FREQ+DATA
 ENDFOREACH
  *CREATE F+10+NELS+CANDIDATE+TARGETS+FILE RECORD
  SFLECT FIRST RECORD FROM
          F+14+NFLS+EMTTTER+ACTIVITY+GROUND+TRUTH+FILE
  SFLECT FIRST PECURD FROM
          F+15+NFLS+EMITTER+CHARACTERISTICS+FILE
    :D+061+NELS+FMISSION+DURATION+DATA :=
      D+064+NELS+EMISSION+STOP+TIME+DATA -
      D+063+B+NELS+EMISSION+START+TIME+DATA
    :D+O62+NELS+FMISSION+SIGNAL+STRENGTH+UATA :=
      D+078+A+NELS+EMITTER+PCWFR+LEVFL+DATA
    :D+063+NELS+FMISSION+START+TIME+DATA :=
      D+063+3+NELS+EMISSION+START+TIME+DATA
    ID+073+NELS+EMITTER+FREULENCY+RANDWIDTH+DATA I=
      D+073+8+MELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
    ID+075+NELS+EMITTER+TO+DATA := U+075+8+NFLS+EMITTER+ID+DATA
    :D+URS+NFLS+FMTTTER+X+DATA :=
       D40P5+H+NFLS+EMITTER+Y+DATA:
     D+OR6+NFLS+FMITTER+Y+DATA :=
       DAUAGARANELSAFMITTERAYADATA :
     DEORTENELSEEMITTERETEDATA :=
       D+OR7+8+NFLS+EMTTTEF+Z+DATA :
   D+081+MELS+EMITTER+TRAMSMISSION+FREQUENCY+DATA :=
      D+081+B+NELS+EMITTER+TRANSMISSION+FREUHENCY+DATA
    D+130+SCENARIA+GEN+JD+NUM+DATA :=
      D+130+8+SCENARIO+GEN+ID+MUM+DATA
END . H.
 DATE+ENTERED: 11182.
 DESCRIPTION:
          "THE NFLS GPS WILL DIRFCT THE NELS AIRRORNE SENSORS
TO TUNE TO A SPECIFIC PREQUENCY PAND: THE NARPOWEAND EMITTER
GROUND TRUTH DATA BASE IS SEARCHED FOR ALL EMITTERS TRANSMITTING
ON A FREQUENCY WITHIN THE BAND TO WHICH THE SENSOR RECEIVEDS
HAVE BEEN TUNED".
 ENTERED+RY: "JJF-NFLS".
 GAMMAI
     "VAR SSTEMPP : REAL
          ISSFILTER : ROOLFAN
 *PEGIN
   SSTEMPR := D+018+ASP+PITCH+DATA
   ISSTEMPP I= D+010+ASP+ALTITUDE+DATA
   FOR FACH F+14+NELS+EMITTEK+ACTIVITY+GROUND+TPUTH+FTLE RECORD
   DO REGIN
     IF (D+063+b+NELS+FMISSICN+START+TTME+DATA <=
         D+021+ASP+TIME+DATA) AND
        (D+064+NFLS+EMISSION+STOP+TIME+DATA >=
         D+021+ASP+TIME+DATA) THEN BEGIN
       (* MEETS TIME, CLUCK SOI. *)
       SFLECT FIRST RECORD FROM
              F+21+NELS+PRE+PRIEFED+SUI+END+FRFQ+DATA
       ; SSFILTER := FALSE
```

```
SWHILE FOUND AND NOT SSFILTER DO BEGIN
        IF NOT (((D+103+NELS+PRE+BRIEFED+SOI+END+FREG+DATA>=
              D+OA1+H+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA)
             (D+106+NFLS+PRE+RRIEFED+SDI+START+FREU+DATA<=
              D+081+B+NELS+EMITTER+TRANSMISSION+FREQUENCY+UATA))
             (D+104+NFLS+PRF+8RIEFED+SOI+FRFW+DATA =
              D+OH1+8+NFLS+FMTTTER+TRANSHISSION+FREQUENCY+DATA)
             (D+091+NFLS+FREGILENCY+SCAN+DATA =
              D+081+8+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA)1
            THEN SSFILTER IN THUE
        ISELECT NEXT PECORD FROM
                F+21+NELS+PRE+BRIEFED+SQI+FILE
      END (* "HILE *)
      IF NOT SSFILTER THEN HEGIN
        (* ADD TO CANDIDATE TARGET LIST *)
        CREATE F+10+NFLS+CANDIDATE+TARGETS+FILE RECORD
        10+061+MELS+EMISSION+DURATION+DATA :=
          D+054+NELS+FMISSICN+STOP+TIME+DATA -
          D+063+B+NELS+FMISSION+START+TIME+DATA
        ID+063+NELS+EMISSION+START+TIME+DATA :=
          D+O63+B+NFLS+EMISSION+START+TIMF+DATA
        ID+075+NELS+EMITTER+ID+DATA IN
          D40754A4NELS4FMITTER4TD4DATA
        10+085+NELS+EMITTER+X+DATA :=
          D+085+B+NFLS+FMITTER+X+DATA
        ID+086+NELS+EMITTFR+Y+DATA :=
          D+086+B+NFLS+FMITTER+Y+DATA
        ID+087+MELS+EMITTER+Z+DATA :=
          D+OM7+8+NFLS+EMITTER+Z+DATA
        ID+ORI+MELS+EMITTER+TRANSMISSION+FREGHEMCY+DATA :=
          D+081+B+NELS+FMITTEP+TRANSMISSION+FREDUFNCY+DATA
        ;D+130+SCENARTO+GEN+ID+NUM+DATA :=
          D+130+B+SCENAPIO+GEN+TD+NUM+DATA
        SELECT FIRST RECORD FROM
                F+13+NELS+EMITTER+CHARACTERTSTICS+FTLF
        INHILE D+075+NELS+EMITTER+ID+DATA <>
               D+075+NELS+EMITTER+ID+DATA DO BEGIN
          SELECT NEXT RECORD FROM
                 F+15+NFLS+EMITTER+CHARACTERISTICS+FILE
        END (* WHILE *)
        10+062+NELS+EMISSIU!+SIGNAL+STRENGTH+DATA :=
          D+078+A+NFLS+FMITTER+POWER+LEVEL+DATA
        ID+075+NELS+EMITTER+FREQUENCY+BANDHIDTH+DATA I=
          D+057+NELS+FMITTER+BANDWIDTH+DATA
      END
    ENU
  END ENDFOREACH
END . ".
 INPUTS:
      UATA:
            D+011+ASP+ATTITUDE+DATA
             D+013+ASP+LOCATION+DATA
      DATAS
      DATA:
             D+020+ASP+STATE+VECTOR+DATA
             Dengienel Sefperuency-Scanedata
      DATA:
            Fe14+NELS+EMITTER+ACTIVITY+GROUND+THUTH+FILE
      FILE
      (* USEU BHT NOT UPDATED *)
```

```
FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE
          (* USED BUT NOT UPDATED *)
          FILE: F+21+NELS+PRF+HRIEFED+SOI+FILE.
     OUTPUTS:
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM!
          OPIGINATING+REUDIREMENT: ORIGHRED-NELS+EMITTER+DFFAULT
          URIGINATING+REQUIREMENT: URIG+REQ+NELS+SIGNAL+OF+INTEREST.
     REFERRED BY:
          SUBNET:
                  S+5+MUDEL+NELS+SENSOR+SUB.
ALPHA:
       A+19+NELS+SIGNAL+TO+NOISE+DETECTARILITY+ALPHA.
     RETA:
          MVAR DREAL : REAL
  I PEGIN
    DPEAL IS D+018+ASP+PITCH+DATA
    IDREAL IS DECLOSED ASPEALTITUDE +DATA
    IPREAL IS DOOL4+ASP+LOC+X+DATA
    IFOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO BEGIN
      D+061+NELS+EMISSION+DURATION+DATA :=
        D+061+NELS+FMISSINN+DURATION+DATA
      :D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
        D+062+NELS+FMISSION+SIGNAL+STRENGTH+DATA
      ID+063+NELS+EMISSION+START+TIME+DATA :=
        D+063+NELS+FMISSION+START+TIME+DATA
      ID+073+NELS+FMITTFH+FREQUENCY+BANDWIDTH+DATA :=
        D+073+NELS+FMITTEP+FREQLENCY+BANUWIFTH+DATA
      ID+075+NELS+EMITTER+ID+DATA := D+075+NELS+EMITTER+ID+DATA
      ID+085+NELS+EMITTER+X+DATA 12
         D+085+NELS+EMITTER+X+DATA;
       D+086+NELS+EMITTER+Y+DATA :=
         D+086+MELS+EMITIFR+Y+DATA :
       D+007+NELS+EMITTER+Z+DATA :=
         D+087+NELS+EMITTER+Z+DATA :
      D+081+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
        D+ORI+NELS+FMITTER+TRANSMISSION+FREQUENCY+DATA
      10+130+SCENARIO+GEN+ID+NUM+DATA 1=
        D+130+SCENARIO+GEN+ID+NUM+DATA
    END ENDFOREACH
    IFOR EACH F+26+NELS+WEATHER+CONDITIONS+FILE RECORD DO
      DREAL 1= D+144+X+WEATHEP+LOC+DATA
                                         ENDFORFACH
  ENU . " .
     DATE+ENTERED: 11182.
     DESCRIPTION:
             TIME SZN AT FACH ATROORNE SENSOR RECEIVER IS COMPUTED
   FOR EACH EMITTER WITHIN THE CANDIDATE TARGET LIST: IF THE S/N
   DOES NOT EXCEED A PRESET THRESHOLD FOR AT LEAST TWO OF THE NELS
   SENSOR RECEIVERS, THE FMITTER IS REMOVED FROM THE CAMDIDATE
   TARGET LIST".
     ENTERED+BY: "JJF-NFLS".
     GAMMA:
      "VAR SSTEMPH : REAL
           ISSTRANSMISSION I REAL
           ; SSTHRESHOLD : REAL
  BEGIN
    SSTEMPH := D+018+ASP+PITCH+CATA
    ISSTEMPR IS D+010+ASP+ALTITUDE+DATA
    ISSTHRESHOLD I= 1.2
```

```
IFOR FACH F+10+NELS+CANDIDATE+TARGETS+FILE RECORD DO REGIN
      SELECT FIRST PECORD FROM
             F+26+NELS+WEATHER+CONDITIONS+FILE
      #WHILE SQRT(SOR(D+085+NFLS+FMITTER+X+DATA +
                      D+144+X+MEATHER+LOC+DATA) +
                  SOR (D+086+NFLS+EMITTER+Y+DATA -
                      D+146+Y+WEATHER+LOC+DATA)) > SGRT(2.0)
      DO REGIN
        SELECT NEXT RECORD FROM
               F+26+NELS+WEATHER+CONDITIONS+FILE
      END (* WHILE *)
      CASE D+120+PRECIPITATION+DATA OF
        NONF : SSTRANSMISSION := 1.5
        : DRIZZLE : SSTRANSMISSION := 1.4
        ; PAIN : SSTRANSMISSION := 1.3
        ; SNOW : SSTPANSMISSION := 1.3
        :SLEET : SSTRANSHISSION := 1.2
        * HAIL : SSTRANSMISSION := 1.1
        PIME : SSTRANSMISSION := 1.4
      END (* CASE *)
      ; IF SSTRANSMISSION < SSTHRESHOLD THEN BEGIN
        DESTROY F+10+NELS+CANDIDATE+TARGETS+FILE RECORD
      END
   END ENDFOREACH
 END; ".
    INPUTS:
          DATA:
                D+011+ASP+ATTITUDE+DATA
          DATA:
                D+013+ASP+LOCATION+DATA
          DATA: D+020+ASP+STATE+VECTOR+DATA
          FILE: F+10+NELS+CAMDIDATE+TARGETS+FILE
          FILE: F+26+NELS+WEATHER+CONDITIONS+FILE
          (* USED BUT NOT UPDATED *).
     OUTPUTS:
         FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+NELS+STGNAL+TO+NOISE.
     REFERRED BY:
          SUBNET: S+5+MODEL+NELS+SENSOR+SUR.
ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     RETAI
       *RFGIN
    D+005+ASET+MSG+SOURCE+DATA IN NELS
    ID+004+ASET+MSG+NAME+DATA IN MN+14+MELS+TRACK+MESSAGE
    ID+002+ASET+MSG+DEST+DATA := ASE
    1D+029+CARTO+SECTION+NUM+DATA := 1
    ID+047+GROUND+TARGET+LENGTH+DATA := 0.0
    :D+050+GROUND+TARGET+VELOCITY+DATA := 0.0
    ID+142+TRACK+MESSAGE+DATA I= TRACKING
    FOR EACH F+25+NELS+TYPED+EMITTER+REPORT+FILE RECORD DO BEGIN
      D+045+GPS+ID+DATA := GPS+1+NELS
      ID+046+GROUND+TARGET+FREQUENCY+DATA IF
        D+074+NELS+EMITTER+FREQUENCY+DATA
      ID+135+SENSUR+ID+DATA IN NELS+GPS+1
      * CREATE F+07+GROUP+TARGET+LOCS+FILE RECORD
      IP+049+GROUND+TARGET+LOC+X+DATA I= D+167+NELS+EMITTER+X+DATA
      :P+049+GROUND+TARGET+LOC+Y+DATA := D+168+NELS+EMITTER+Y+DATA
    END ENDFOREACH
```

```
ENDI".
   DATE+ENTERED: 11882.
   DESCRIPTION:
           "TO INFORM ASE OF TARGETS CURRENTLY UNDER SUPVEILLANCE,
 THOSE ABOUT TO BE LOST, AND THOSE NOT CURRENTLY UNDER
 SURVEILLANCE WHICH COULD OR SHOULD BE".
   ENTERED+BY: "JJF-NELS".
   GAMMA:
       *PROCEDURE SSZOMAKE
          18EGIN
            CASE D+080+NELS+EMITTER+TRAFFIC+TYPE+DATA OF
              PASSIVE : BEGIN
                D+005+ASET+MSG+SQURCE+DATA IM NELS
                IN+004+ASET+MSG+NAME+DATA I=
                : MN+05+NELS+NCN+SURVEILLANCE+TAPGET+REPORTS
                ; D+002+ASET+MSG+DEST+DATA := ASE
                IP+045+GPS+ID+DATA :# GPS+1+NELS
                : D+046+GROUND+TARGET+FREQUENCY+DATA :=
                  0+074+NELS+EMITTER+FREQUENCY+DATA
                :D+047+GROUND+TARGET+LENGTH+DATA :# 0.0
                ; D+050+GROUND+TARGET+VELOCITY+DATA := 0.0
                CREATE F+07+GROUP+TARGET+LDCS+FILE RECORD
                 ; C+048+GROUND+TARGET+LOC+X+DATA :=
                   D+167+NELS+EMITTER+X+DATA
                 :D+049+GROUND+TARGET+LOC+Y+DATA :=
                   D+168+NELS+EMITTEP+Y+DATA
                 JEEBFORM
                 (M+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT)
              END
              POTENTIAL THPEAT : BEGIN
                D+005+ASET+MSG+SOURCE+DATA := NELS
                 ; P+004+ASET+MSG+NAME+PATA :=
                   MN6124NFLS6SURVFILLANCE+TARGET6PEPORTS
                 ; P+002+ASET+MSG+DEST+DATA := ASE
                 : P+045+GPS+ID+DATA := GPS+1+NELS
                 :D+046+GROUND+TARGET+FREQUENCY+DATA :=
                   D+074+NELS+EMITTER+FREQUENCY+DATA
                 : P+047+GROUND+TARGET+LENGTH+DATA := 0.0
                 : P+050+GROUND+TARGET+VELOCITY+DATA := 0.0
                 CHEATE F+07+GROUF+TARGET+LOCS+FILE RECORD
                ; D+048+GROUND+TARGET+LOC+X+DATA 1=
                   D+1A7+NELS+EMITTER+X+DATA
                 IP+049+GROUND+TARGET+LOC+Y+DATA IM
                   D+168+NFLS+EMITTER+Y+DATA
                 :FEAFORM
                 (M+12+MELS+SUPVEILLANCE+TARGET+PEPORT+MSG+OUT)
              E * D
               : THREAT : BEGIN
                D+005+ASET+MSG+SDURCE+DATA := NELS
                 IT+004+ASET+MSG+NAME+DATA IE
                  MN+14+NELS+TPACK+MESSAGE
                 ID+002+ASFT+MSG+DEST+DATA IF ASE
                 :0+029+CARTO+SECTIUN+NUM+DATA := 1
                 : P+135+SENSOR+ID+DATA IT NELS+GPS+1
                 : P+142+THACK+MESSAGE+DATA := CAN+TRACK
                 JEERFORM (M+14+NELS+TRACK+MESSAGE+HSG+DUT)
               END
           END (* CASF *)
```

```
END (* SSZOMAKE *)
    1 BEGIN
      SELECT FIRST RECORD FROM
             F+25+NELS+TYPFU+E*ITTFR+KEPORT+FILE
      IT FOUND THEN BEGIN
        SSZOMAKE
         ISPLECT MEXT RECORD FROM
                 F+25+NFL9+TYPEC+EMICTER+PEPUPT+FTLF
         I WHILE FUUND ON REGIN
           SSSOMAKE
           ISELECT BEXT RECORD FROM
                  F+25+NFLS+TYPED+EMITTER+PLFURT+FTLF
        END (* WHILE #)
      END
    FNO
    IPROCEDURE SSZODEMMY
       SUFFITN (* DUMMY PEADER FOR PROCEDURE THAT IS NEVER CALLED. *)
       C* INTENDED TO DECEIVE REVS SO THAT THE THREE FERFORM CALLS*)
       (* WILL NEVER BE EXECUTED. IN GENERAL, ALL THREE MESSAGES *)
      (* MAY NOT BE FORMED EVERY TIME THE ALPHA IS EXECUTED. *)
      END: ".
    FURMS:
         MESSAGE:
                  - MADSANEL SANCNASJRVETLLANCEATARGETARFPORTSAMSGADUT
         MESSAGET
                  - METRENET SESTAVETLLANCE ETARGET ERFRORTSEMAGED!!T
         MESSAGE: MATHAMELSATRACKAMESSAGEAMSGADMI.
     TAPHTS:
         FILE: FARSANFLIGHTYPEPAFNTTTERAREPURTAFTEF.
    OUTPHIS:
         DATA:
                - DEPOSEASETEMSGEIDEDATA
         DATA:
                DATA: DECAGEROUNDETARRETERRUIENCYEDATA
         UNTO: PENATERROUSOFTARGETELESGIHEDATA
         DATA: DEOSOEGROUNDETARGETEVEL COLTYEDATA
         DATA: 0+135+SEHSOR+ID+DATA
         DATA: D+142+TRACK+MESSAGE+PATA
         FILE
               - F+02+C4RT0+UFD4TF+FILE
         FILE: F+07+GPUMP+TARGET+LOCS+FILE.
     TRACED FHOM:
          ORIGINATING+HEADIREMENT: URIG+PER+NELS+EXTERNAL+THTEPFACE.
    FEFERRED BY:
          SUBNET: S+2+DO+NFLS+CPFRATIONAL+CONTROL+SUB.
ALPHA: A+21+NELS+TARGET+ACGUISTITON+&LPHA.
     PETAT
            "VAR PREAL : DEAL;
   MEGIN
    DREAL 1= De018+45P+PTTCH+04T4
     IDPEAL I= D+010+ASP+ALTITUEE+DATA
     IDREAL IS DECIMEASPELUCEXECATA
     FOR EACH F41240FTFCTEN4CANDIDATE+TARGETS4FILE RECORD DO BEGIN
       CREATE F#17+NELS+ESTIMATED#EMITTER#PAHAMETERS#FILE HECOHO
       :O+159+NELS+FHITTER+FREQUENCY+RANGKIFTH+DATA :=
           D+150+NEL S+EMITTER+FREQUENCY+HANDWIDTH+DATA
         IDEO774NELSEEMTTTEREMODULATIONETYPEEDATA IS MODULATED
         10+078+NELS+FMITTER+PORER+LEVEL+DATA := 0.0
         10+161+NELS+FMITTER+TRANSMISSION+FREQUENCY+UATA 1=
           DE1524NEL SEEMITTERETRANSMISSIONEFREQUENCYEDATA
       *CREATE F+18+NFL3+FSTIMATEN+GROUNG+TRUTH+FTLE RECORD
```

11

```
10+157+NELS+EMISSION+DURATION+DATA 13
        D+147+NELS+EMISSION+PURATION+DATA
      BUALGOANELSAFMITTERAIDADATA := DALSLANFLSAFMITTERAIDADATA
    D+162+NELS+EMITTER+X+PATA :=
       D+153+NELS+EMITTER+X+CATA:
     D+163+NELS+FHITTER+Y+DATA :=
       D+154+NELS+EMITTER+Y+DATA :
     D+164+NFLS+EMITTER+7+PATA :=
       D+155+NELS+EMITTER+Z+DATA
     ; D+162+NELS+EMITTFR+X+DATA :=
       D+153+NELS+EMITTEP+X+PATA
     ID+163+NELS+EMITTFR+Y+DATA I=
       U+154+NELS+EMITTEP+Y+PATA
     ID+164+HELS+EMITTFR+Z+DATA :=
       D+155+NELS+FMITTER+Z+DATA
     ID+165+SCENAKIO+GFN+1D+NUM+DATA :=
       D+156+SCEMARID+GEN+ID+NHM+DATA
    CREATE F+24+NELS+TONA+OP+FILE RECORD
      10+058+NELS+DD+1+2+DATA := 0.0
      10+059+NELS+DU+1+3+DATA := 0.0
      10+060+NELS+DD+2+3+DATA := 0.0
      10+109+NFLS+TDOA+1+2+04T4 := 0.0
      1U+110+NELS+TD04+1+3+04TA 1= 0.0
      10+111+NELS+TD04+2+3+04TA := 0.0
  END ENDFOREACH
END: ".
  DATE+ENTERED: 11282.
  DESCRIPTION:
          *THE TARGET ACQUISITION MODULE ESTIMATES EMITTER STGNAL
CHARACTERISTICS SUCH AS FREULENCY, BANDWIDTH, FFFECTIVE MADIATED
POWER, AND MODILATION TYPE: IT ALSO ESTIMATES EMITTER TIME
DIFFERENCE OF ARRIVAL (TODA) AND DIFFPENTIAL DOPPLER (OU)
INFORMATION FOR FACH DETECTABLE EMISSION RELATIVE TO EACH SENSON
PLATFORM".
  FNTERED+RY: "JJF=NELS".
  GAMMA:
    MVAR SSTEMPR : REAL
1BFGIN
  SSTEMPR := D+018+ASP+PTICH+DATA
  :SSTEMPR := D+010+ASP+ALTITUDE+DATA
  ISSTEMPR := D+014+ASP+LOC+X+DATA
  FOR EACH F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD DO HEGIN
    CREATE F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE RECORD
    :D+159+NELS+FMITTER+FHFULENCY+RANDWIDTH+DATA :=
      D+150+NELS+E"ITTFR+FPERUENCY+BANDWIDTH+DATA
    10+077+NELS+EMITTER+MODULATION+TYPE+DATA 1= MUDULATED
    10+078+NELS+FMITTER+POWER+LEVEL+DATA 12
      D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
    ID+161+NELS+EMITTER+TRANSMISSION+FREDUENCY+DATA :=
      D+152+NELS+EMITTFR+TRANSMISSION+FREUHENCY+DATA
    *CREATE F+18+NELS+FSTIMATED+GROUND+TRUTH+FTLF RECORD
    :D+157+NELS+EMISSION+DURATION+DATA :=
      D+147+NELS+EMISSION+DURATION+DATA
    10+158+NELS+EMISSION+START+TIME+DATA 1=
      D+149+NELS+EMISSION+START+TIME+DATA
    ID+160+NELS+FMITTER+ID+DATA := D+151+NELS+FMITTER+ID+DATA
     : D+162+NELS+EMITTER+X+DATA :=
      D+153+NELS+EMITTFR+X+DATA
```

```
D+163+NELS+FMITTEP+Y+DATA IM
         D+154+NELS+EMITTER+Y+DATA
       1D+164+NELS+FMITTER+Z+DATA 1=
         D+155+NELS+EMITTER+Z+DATA
       +D+165+SCENARIO+GEN+ID+NUM+DATA :=
         D+156+SCENARIO+GEN+ID+NUM+DATA
     FND ENDFOREACH
     JCREATE F+24+NELS+TODA+DD+FILE RECORD
     10+058+NELS+DD+1+2+DATA := 0.0
     10+059+NELS+DD+1+3+DATA := 0.0
     10+060+NELS+DD+2+3+DATA 1= 0.0
     10+109+NELS+TD0A+1+2+DATA 1= 0.0
     :U+110+NELS+TUNA+1+3+DATA := 0.0
     10+111+NELS+TDOA+2+3+DATA 1= 0.0
   ENDIM.
     INPUTS:
          DATA:
                D+011+ASP+ATTITUDE+DATA
          DATAL
                 D+013+ASP+LOCATION+DATA
          DATA:
                D+020+ASP+STATF+VECTOR+DATA
          FILE: F+12+DETFCTEP+CANDIDATE+TARGETS+FILE.
     OUTPHIS:
         FILE:
                 F+17+NELS+FSTIMATED+FMITTER+PARAMETERS+FILE
                 F+18+NFLS+ESTIMATED+GHOUND+TRUTH+FTLF
          FILE
          FTLF:
                 F+24+NFLS+TDGA+DD+FILE.
     TRACED FROM:
          URIGINATING+REGULREMENT: ORIGHRED+NELS+TARGET+ACQUISTTION.
     REFERRED BY:
          SHBNET:
                  S+3+MODEL+NELS+GPS+PROCESSING+SUR.
ALPHA:
       A+22+NELS+TERPAIN+FOLIAGE+SMADOWING+ALPHA.
     PETA:
            "VAR DREAL : PEAL;
   REGIN
     DREAL := D+018+ASP+PITCH+DATA
     ; DREAL := D+010+ASP+ALTITUDE+DATA
     DREAL IT DOOLULASPOLOCOXODATA
     FOR EACH F+08+HYPSO+DATA+FILE RECORD DO
       DREAL := D+051+HYPSO+ELEV+DATA ENDFOREACH
     FOR EACH F4104NFLS+CANDIDATE+TARGETS+FILE RECORD DO HEGIN
       CREATE F+12+DETECTED+CANDIDATE+TARGETS+FILE PECORD
         10+147+NELS+EMISSION+DURATION+DATA 1=
           D+061+MELS+EMISSION+CURATION+DATA
         :D+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
           D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
         JU+149+NELS+FMISSION+STAPT+TIME+DATA :=
           D+063+NELS+EMISSION+START+TIME+DATA
         ;D+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
           D+073+NFLS+EMITTER+FREQUENCY+RANDWIDTH+DATA
         1D+151+NFLS+FMITTER+ID+DATA := D+075+NFLS+FMITTER+ID+DATA
       10+153+NELS+FMITTER+X+DATA 1=
          D+085+NELS+FMITTER+X+DATA;
        D+154+NELS+EMITTER+Y+DATA :=
          D+086+NFLS+EMITTEP+Y+DATA ;
        D+155+NELS+FMITTER+Z+DATA :=
          D+087+NELS+EMITTER+Z+DATA ;
         D+152+NELS+EMITTER+THANSMISSION+FREQUENCY+DATA :=
           D+081+NEI S+EMITTFR+TRANSMISSION+FREQUENCY+PATA
         :D+156+SCENARIO+GEN+ID+NUM+DATA :=
```

```
D+130+SCENARTO+GEN+ID+NUM+DATA
 FUD ENDEDREACH
FNP : " .
 DATE+ENTERED: 11182.
  DESCRIPTION:
          THE FINAL PROCESS IN MODELLING PHITTER DETECTABILITY
IS TO ELIMINATE ANY EMITTERS WITHIN THE CANDIDATE TARGET LIST
WHICH CANNOT BE DETECTED BY THE MELS AIRBORNE SEMSOR RECEIVERS
DUE TO TERRAIN SHADOWING: THE TERRAIN SHADOWING ALGORITHM SCANS
THE HYPSOGRAPHIC DATA ALONG A LINE-OF-SIGHT VECTOR CONNECTING THE
SENSOR AND THE EMITTER; IN ORDER TO PERFORM A LOCATION ESTIMATE
ON THE EMITTER, THE EMITTER MUST BE DETECTABLE BY AT LEAST TWO OF
THE AIRBORNE SENSOR PLATFORMS".
  FNTEREDORY: "JJF-NELS".
  GAMMA:
     MVAR SSTEMPR : PEAL
          ; SSFILTER : ROOLFAN
          SSRAND : REAL
 ; FUNCTION SSRANDU : REAL
   ; PEGIN
     SSRAND := 20.0 * SSRAND + 357.0
     ISSRAND := SSPAND - TRUNC(SSRAND)
     ISSRANDU I= SSRAND
   END
 ; REGIN
   SSTEMPR := D+018+ASP+PITCH+DATA
   ISSTEMPR := D+010+ASP+ALTITUDE+DATA
   :SSTEMPP := D+014+ASP+LOC+X+DATA
   SELECT FIRST RECORD FROM
           F+08+HYPSO+DATA+FILE
   ISSTEMPR I= D+051+HYPSO+ELEV+DATA
   (* SINCE IT IS IMPRACTICAL TO MODEL THIS PROCESS WITHOUT *)
   (* DIRECT ACCESS FILES, A RANDOM NUMBER GENERATOR WILL BE *)
    (* EMPLOYED. *)
    155PAND := 0.450192
    FOR EACH F+10+NELS+CANDIDATE+TARGETS+FILE PECURD DO HEGIN
     IF SSRANDU ># 0.5 THEN BEGIN
        CREATE F+12+DETECTED+CANDIDATE+TARGETS+FILE RECORD
        IN-147+NFI SEEMISSION+DURATION+DATA IR
          D+061+NELS+EMISSION+DURATION+DATA
        : D+14R+MELS+EMISSION+SIGNAL+STRENGTH+DATA :=
          D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA
        :D+149+NELS+EMISSION+START+TIME+DATA :=
          0+063+NFLS+EMISSION+START+TIME+DATA
        ID+150+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
          D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
        ID+151+NELS+EMITTER+ID+DATA IF
          D+075+NFLS+EMITTER+ID+DATA
        IN+153+NELS+EMITTER+X+DATA 1=
          D+085+NFLS+FMITTER+X+DATA
        : P+154+NELS+FMITTER+Y+DATA :=
          D+086+NELS+EMITTEP+Y+DATA
        ; [-+155+NELS+EMITTER+Z+DATA 1#
          D+087+NFLS+EMITTER+Z+DATA
        IN+152+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA 13
          D+081+NFLS+EMITTEF+TRANSMISSION+FREQUENCY+DATA
        1D+156+SCFNARIO+GEN+ID+NUM+DATA IR
          D+130+SCENARIO+GEN+ID+NUM+DATA
```

```
END
     END ENDFOREACH
    END . .
     INPUTS:
         DATA:
                 D+011+ASP+ATTITUDE+DATA
          DATA:
                 D+013+ASP+LOCATION+DATA
          DATA:
                D+020+ASP+STATF+VECTOR+DATA
          FILE
                F+08+HYPSU+DAT4+FILE
          (* USED BUT NOT UPDATED *)
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
    PUTPUTS:
          FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          OPIGINATING + REQUIREMENT: ORIG + PER+NELS+TFRPATN+SHAPDWING.
    REFERRED BY:
          SUBNET: S+5+MODEL+NELS+SENSOR+SUB.
        A+23+NELS+TPREAT+TABLF+UPDATE+ALPHA.
ALPHA:
    RETA:
            "BEGIN
    FOR EACH F+25+NFLS+TYPED+EMITTER+REPORT+FILE RECORD DO BEGIN
     CREATE F+13+NFLS+EMISSION+THREAT+TARLE+FILE RECORD
       :0+182+NELS+EMTTTED+RANDWIDTH+DATA :=
          D+176+NFLS+FMITTEP+PANDWIDTH+DATA
        ID-183+NELS-EMITTER-CEP-DATA := D-177+NFLS+FMITTER-CEP+DATA
        ID41714NELS4EMITTER4ID4DATA := D41664NELS4EMITTER4ID4DATA
       :D+173+NELS+FMITTER+X+PATA :=
          D+167+NELS+EMITTER+X+CATA;
        D+174+NELS+EMITTED+Y+DATA :=
          DA1684NELSAEMITTERAYADATA :
        D+175+NEL5+FMITTER+Z+DATA :=
          De169+NFLS+EMITTER+7+DATA :
        DelaieNFLSeEmittepeMorulationetyPE+DATA :=
          D+178+NFLS+EMITTEP+MODULATION+TYPE+DATA
        :D+C79+NELS+EMITTER+TIME+OF+LOCATCIN+DATA :=
          D+179+NELS+EMITTEP+TTMF+OF+LOCATOIN+DATA
        :0+080+NELS+EMITTFR+TRAFFIC+TYPE+DATA :=
          D+180+NELS+EMITTEP+TRAFFIC+TYPE+DATA
        :0+172+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA :=
         D+172+NFLS+FMITTEP+TRANSMISSION+FREQUENCY+LATA
         END
         FNDFOREACH
         FND;".
    DATE - ENTERED: 11282.
     DESCRIPTION: "MAINTAINS THE NELS TARGET THREAT TABLE".
    FNTEPED+BY: "JJF=NELS".
     CAMMAI
         "HFGIN
    SFLECT FIRST PECORD FROM
                 F+25+NELS+TYPED+FHITTER+REPORT+FTLE
    FIF FOUND THEN PEGIN (* IS THERE ANYTHING OF UPDATE LIST. *)
      SELECT FIRST PECURD FROM
             F+13+NFLS+FMTSSION+THPFAT+TARLE+FILE
      ITE FOUND THEM REGIN (* UPDATE EXISTING TABLE, ELSE BUILD *)
                           (+ TAPLE. +)
        (* IF IT'S IN THE TAPLE, UPDATE IT. ELSE ADD A NEW RECORD. *)
        THATLE FOUND DO HEGIN
       TF (D+171+VELS+EMITTFD+IC+DATA = F+166+NFLS+FMITTED+TD+DATA)
```

```
(SQRT(
       SOR (D+173+NELS+FMTTTEG+X+DATA - U+167+NFLS+FMTTTER+X+DATA)
       SOR(O+168+NFLS+FMITTER+Y+DATA - D+174+NFLS+EMITTER+Y+DATA)
       ) <= 1000.01
       THEN REGIN
      10+173+NFLS+FMTTTEP+X+CATA 12
         D+167+NELS+ENTITEP+*+PATA;
       D+174+NFLS+EMITTER+Y+FATA :=
         D-168+HFLS+ENTITEP+Y+DATA :
       DA175+NFLS+FAITTER+Z+CATA :=
         D+169+NFLS+FMTTTEP+7+DATA 1
         U+135+NFLS+FMTTTEP+CFP+DATA :=
            1)+177+NFLS+FMTTTES+CED+NATA
          SELECT FIRST RECORD FROM
                  F+13+NELS+EMISSTOM+THPEAT+TABLE+FTLF
          ISELECT FIRST RECORD FROM
                  FARSAMEL SATYPET AEMITTERAREPORTAFILE
       ENIL
       ELSE REGIA
          SELECT MEXT RECORD FROM
                 FOISONFL SOFMISSIONOTHREATOTARL FOFTI E
       END
     END (+ WHILE +)
   END
   ELSE PEGIN
     CHEATE FAISAMELSAFMISSIONATHREATATABLEAFILE RECORD
      INFIRZEMELSEEMITTERERANDWIDTHELIATA I=
        DATTOANELSAFMITTERABARDKINTHADATA
      ID+183+NELS+EMITTER+CEP+DATA := D+17/+NFLS+FMITTEP+CEP+DATA
      IDEATA THE USE BUITTER SIDEDATA := DEACHMET SEEMITTER SIDEDATA
      INDITION TO THE TANKE SEED TO THE SEED TO THE
       DAIGTANFL SAFMITTERAXAPATAI
       DAT TUANEL SAFMITTERAYADATA :=
       DE168ENFLSEFMITTEREYERATA ;
       D+175+NEL S+EMITTER+Z+DATA :=
        U+1494NFLS4FMTTTER+74PATA
      #D+181+NELS+EMITTER+MODULATION+TYPE+DATA :=
        D+178+NFLS+FMITTEP+MURULATION+TYPF+DATA
      IDANTOANELSAEMITTERATTMEANEANEALOCATIONANATA :=
        DAIT94NELS4FMITTER+TIME+UF41 OCATION+DATA
      IN+OBO+NELS+EMITTER+TEAFFIC+TYPE+DATA IN
        U+180+NFLS+EATTTEP+TR4FFIC+TYPE+UATA
      ID+172+NELS+EMITTER+TPANSMISSION+ERFUNEMCY+DATA I=
        D+074+NFLS+FMITTER+FRFUIENCY+DATA
    E+O
  Et:0
END,"
   INPUTS:
               F+13+NFLS+FMTSSIMN+THREAT+TAGLF+FILE
        FTLF:
               F+25+NFLS+TYPED+EMTTTER+REPORT+FILE.
        FILF:
   OUTPUTS:
               F+13+NELS+FMISSION+THREAT+TABLE+FILE.
        FILES
   THACED FRUM:
        ORIGINATING+REQUIREMENT: ORIGHREGHNELS+THESATHTARLE+HPOATE
   PEFFERHFU BY:
```

SUBNET: S+3+MODEL+NELS+GPS+PROCESSING+SUR.

```
ALPHA: A+24+RESET+NELS+ALPHA.
    RETA: "BEGIN END:".
    DATE+ENTERED: 11182.
    DESCRIPTION:
             PREMOVES TARGET AND MEATHER INFORMATION FROM BEING
   AVAILABLE".
     FNTFRED+RY: "JJF-NELS".
     GAMMA:
      *REGIN
       END:".
     restroys:
                        FC+2+NFLS+SCFNARTO+EC
          ENTITY+CLASS:
                        FC+3+NFLS+TASKS+FC
          ENTITY+CLASS:
                        FC+4+NFLS+THPEAT+EC
          ENTITY+CLASS:
                        FC+5+NFLS+VEHICLF+CHARACTERISTICS+EC
          ENTITY+CLASS:
                        FC+6+DFTFCTED+EMISSIONS+INFU+EC.
          ENTITY+CLASS:
     TRACED FROM:
          ORIGINATING + REGUIREMENT: OPIG+REG+TC+CYCLL+START.
     REFERNFO BY:
          RANFT: RAZAMODELANELSASENSORASYSTEMARAMETA
       A+25+UPDATE+CARTO+ALPHA.
AL PHA:
     RETA:
           "VAR DREAL : REAL;
  BEGIN
    FOR EACH F+02+CARTO+UPDATF+FILE RECORD DO
      DREAL IS DED33+CAPTOHIPDATEEX+DATA ENDFORFACH
    ID+D28+CARTO+MAP+SECT+NUM+DATA IE
     DEO28-FARTO-"APESECT-NUM-DATA
    FOR FACH F+01+PRINGE+LOCATIONS+FILE PECOPU DO
      DOEAL := D+024+9RIDGE+LOC+X+DATA FNOFOREACH
    FOR FACH F+G3+CITY+LOCATIONS+FILE RECORD DO
      DOEAL IS DECITY-LOC-XEDATA ENDECHEACH
    FOR EACH FEOREBYPSOEDATAFFILE PECOPO OF
      DREAL := D+051+HYPSO+FLEV+DATA ENDEDHEACH
    FOR EACH FOREMARSHALLINGHAREASHFILE RECORD OU
      DREAL := 0+054+MARSHALLING+X+DATA ENOFUPEACH
    IFOR FACH FORPORTMARYORDADSOFILE MECORD DO
      DREAL IS 0+121+PHIMARY+POADS+X+DATA EMOFOREACH
    IFOR FACH FEZGERATERBADELOCATIONSEFTLE RECURD DO
      DREAL IN DAISSARATERUADALICE XADATA ENTERRACH
    FOR FACH F+30+RIVEP+LOCATIONS+FILE RECORD DO
      DREAL := D+128+PIVEP+LOC+Y+PATA EMDFUPESCH
    FOR FACH F+31+SECUMDARY+POADS+FILE RECORD DU
      DREAL IS THIST-SECONDARY-POAD-X-DATA FNOFOFFACH
  ENDI".
     PATE+ENTFREU: 11482.
     DESCRIPTION: "UPDATES CARTS FILE(S) WITH PEVISED DATA FROM ASE".
     ENTEREDORY: "JUF-NELS".
     GAMMAI
        WVAR SSTEMPI : INTEGER
             ISSUPPATE : BOULEAN
             ISSTEST : BOOLEAN
             : SSO30TEMP : FEOD+030+CARTO+UPDATF+1+0ATA
    ; BEGIN
      FOR FACH FEORECARTMENPRATEFFILE MECURO ON MEMTER
```

```
SS030TEMP := D+030+CARTO+UPDATE+1+DATA
JSS030TEMP I= D+031+CARTC+UPDATE+2+DATA
ISSTEMPI IF DEOZRECAPTOEMAPESECTENUMEDATA
ISSTEMPT := De029+CARTO+SECTION+NUM+DATA
ICASE D+032+CAPTO+UPDATE+3+DATA OF
  PRIDGE : BFGIN
    SELECT FIRST RECORD FROM
           F+01+ARIDGE+LCCATIONS+FILE
    ISSUPDATE IT FALSE
    :SSTEST := FOUND
    INHILE SSTEST DO BEGIN
      TF (0+033+CARTO+UPDATE+X+DATA =
          P+026+BRIDGE+LCC+x+DATA) AND
         CH+034+CARTO+UPCATE+Y+DATA =
          DEDZ7+BRIDGE+LCC+Y+DATA) THEN REGIN
        D+026+BRIDGE+LOC+X+DATA :=
          D+033+CAPTO+UPDATE+X+DATA
        1D+027+BPINGE+LUC+Y+DATA :=
          P+034+CAPTO+UPPATE+Y+DATA
        ISSTEST I= FALSE
        ISSUPDATE := TPUE
      END
      ELSE BEGIN
        SELECT NEXT PECUPO FROM
               F+01+PRIDGE+LOCATIONS+FILE
        :SSTEST := FOUND
      FND
    END (* WHILE *)
    IF NOT SSUPPARE THEN REGIN
      CREATE F+01+RPIDGE+LOCATIONS+FILE RECORD
      :D+026+3PINGF+LUC+X+NATA :=
        De033+CARTHHUPPATEEX+DATA
      1D+027+BPIPGF+LOC+Y+DATA :=
        D+034+CARTO+UPDATE+Y+DATA
   END
 END
  CITY : REGIN
    SELECT FIRST RECORD FROM
           F+03+CITY+LOCATIONS+FILE
    :SSUPDATE := FALSE
    ISSTEST := FOUND
    INHILE SSTEST NO BEGIN
      IF (D+033+CAPTO+UPCATE+X+DATA =
          D+035+CITY+LOC+X+DATA) AND
         (D+034+CAPTO+UPCATE+Y+DATA =
          D+036+CITY+LUC+Y+DATA) THEN REGIN
          D+035+CITY+LOC+X+DATA :=
          P+033+CAPTO+UPCATE+X+DATA
        10+036+CITY+LOC+Y+DATA IT
          D+034+CARTO+HPDATE+Y+DATA
        ISSTEST := FALSE
        ISSUPDATE := TRUE
```

FND
FLSE BEGIN
SELECT NEXT PECOND FROM
F+03+CITY+LOCATIO*S+FILE
#SSTEST ## FOUND

```
END
  END (* WHILE *)
  IF NOT SSUPPARE THEN PEGIN
    CREATE F+03+CITY+LOCATIONS+FILE RECORD
    10+035+CTTY+LOC+X+DATA 1= D+033+CARTO+HPPATE+X+DATA
    :D+036+CITY+LOC+Y+DATA := D+034+CARTD+HPDATE+Y+DATA
  END
END
:P+ROAD : PEGIN
  SELECT FIRST RECORD FROM
         F+28+PRIMARY+POADS+FILE
  SSUPDATE := FALSE
  :SSTEST := FOUND
  WHILE SSTEST DO BEGIN
    IF (D+033+CARTO+UPDATE+X+DATA =
        D+121+PRIMARY+ROADS+X+DATA) AND
       (0+034+CARTO+LIPCATE+Y+DATA =
        De122+PRIMARY+ROADS+Y+DATA) THEN BEGIN
      D+121+PRIMARY+RDADS+X+DATA :=
        De033+CARTOHUPPATE+X+CATA
      :D+122+PRIMARY+RCADS+Y+DATA :=
        D+034+CARTC+UPCATE+Y+DATA
    ENC
    ELSE BEGIN
      SELECT NEXT PECUPO FROM
             F+078+PPIMARY+ROADS+FILE
      :SSTEST := FOURD
    FNO
  END (* WHILE *)
  FIF HOT SSUPDATE THEN REGIN
    CREATE FAZRADRIMARYARDADSAFILE RECORD
    :D+121+PRIMARY+ROADS+X+DATA :=
       D+933+CARTOHUPDATE+X+DATA
    :D+122+PPIMARY+RCACS+Y+DATA :=
      DAD344CARTOHURDATEAYADATA
  END
FND
: HAILROAD : REGIN
  SELECT FIRST HECORD FROM
         F+29+RATLRUAD+LOCATIONS+FILE
  :SSUPDATE := FALSE
  :SSTEST := FOUND
  * MAILE SSTEST DO BEGIN
    TE ( THO 33+ CAPTCHUPCATE+X+DATA =
        D+123+PATEPOAD+ENC+X+DATA) AND
        (C+034+CARTO+UPPATE+Y+DATA =
         D+120+PATEPDAD+LOC+Y+DATA) THE" BEGIN
       D+123+PAJLDDAD+LCC+X+DATA :=
         P+033+CAPTO+UPCATE+X+DATA
       ; D+124+F&IFROAD+LOC+Y+DATA :=
        D+034+CAPTD+UPPATE+Y+DATA
       :SSTFST := FALSE
       ISSUPDATE := TPUF
    END
    FLSE REGIN
       RELECT NEXT PECOFD FROM
              F+29494ILPDAD+LOCATIONS+FILF
       :SSIFST := FOUND
```

```
END
  END (* WHILE *)
   FIF NOT SSUPPLATE THEY REGIN
    CREATE F+27+RATLROAD+LOCATIONS+FILE RECURD
     10+123+RAILROAD+LOC+X+DATA 12
       D+033+CARTO+HPPATF+X+DATA
     10+124+RAILRNAD+LOC+Y+NATA 1=
       D+124+RATLF0AD+LFC+Y+DATA
  ENC
FNO
:S+RDAD : PEGIN
   SELECT FIRST RECORD FROM
         F+31+SECONDARY+ROADS+FILE
   ISSUPDATE := FALSE
   ; SSTEST := FOUND
   IMMILE SSTEST DO BEGIN
     TE (D+033+CAPTO+UPDATE+X+UATA =
        THISIHSECUNDARY+POINDEX+DATA) AND
        ( "+034+CARTO+UPCATE+Y+NATA =
         DE137+SECOUDARYERDADEYEDATA) THEM REGIN
       D+131+SECUNDARY+4UAQ+X+DATA :=
        CENSSECARTOEUPPATEEXEUATA
       ID+132+SECONDARY+ROAD+Y+DATA :=
        NEO34ECAPTOEUPCATEEYEDATA
       :SSUPDATE := TRUE
       :SSTEST := FALSE
    END
    FLSE BEGIN
       SELECT NEXT PERGAD FROM
              F+31+SECONDARY+RUADS+FILE
       ;SSTEST := FOUND
    FND
  FNO CH WHILE HY
   : IF MOT SSUPPATE THEN REGIN
     CREATE F+31+SECONDARY+POADS+FILE HECORD
     :Del31+SECOUDAPY+ROAD+X+DATA :=
       D+033+CARTO+UPPATE+X+DATA
     :D+132+SFCONDARY+RCAD+Y+DATA :=
       De034+CARTOHUPDATE+Y+DATA
  FND
ENC
*MARSHALLING : RECIN
 SPLECT FIRST RECORD FROM
         FLOGENARCHALL INGHAPE & SEFTLE
 ISSUPPATE := FALSE
 :SSTEST := FOUND
 IWHILE SSTERT ON MEGIN
    IF (D+033+CARTO+UPDATE+X+DATA =
        D+054+MARSHALL [NG+x+DATA] AND
       (DEORGECARTHEUPDATEFYEDATA =
        D+055+MARSHALL ING+Y+DATA) THEY MERTY
      D+054+MARSHALLIFG+x+04TA :=
        D+035+CARTO+UFD&TF+Y+CATA
      IDEOSSEMARSHALLIHREYEDATA IT
```

D+034+CARTO+UPDATE+Y+DATA

;SSUPPATE := TRUE

;SSTEST := FALSE

```
END
    ELSE BEGIN
      SELFCT NEXT RECORD FROM
             F+09+MARSHALL ING+AREAS+FILF
      ISSTEST IF FOUND
    END
  END (+ "HILE +)
  IT NOT SSUPLATE THEN BEGIN
    CREATE FOROMARSHALL INGHAPEASOFILE PEROPE
    ID+054+MARSHALLING+X+DATA :=
      D+033+CARTO+UPDATF+X+DATA
    ID+055+MARSHALLING+Y+DATA :=
      D+034+CARTO+UPDATE+Y+DATA
  END
END
:RIVER : PEGIN
  SELECT FIRST RECORD FROM
         F+30+RIVER+LOCATIONS+FILE
  ISSUPPATE := FALSE
  ; SSTEST := FOUND
  : WHILF SSTEST ON REGIN
    IF (DEO35+CARTU-UPDATE+X-PATA = D+128+RTVFR+L*C+X+DATA)
       (D+034+CARTO+UPDATE+Y+DATA = D+129+RTVFR+LDC+Y+DATA)
       THEN BEGIN
      D+128+MIVEH+LOC+x+DATA := D+033+CARTO+UPDATF+Y+DATA
      : THI 29 HPIVER + LOCHY+DATA := THO 34+ TAPTO+ HPOATE + Y+ DATA
      :SSUPPATE := TRUE
      :SSTEST := FALSE
    Ł NÜ
    ELSE BEGIN
      SPLECT NEXT RECORD FROM
             F+30+RIVFR+LOCATIONS+FILE
      :SSTEST := FQUND
    END
 END (+ *HTLF +)
  FIF NOT SSUPPORTE THEN BEGIN
    CREATE F+30+RIVER+LCCATIONS+FILE PECOPO
    IN-124-FIVER-HOCEX-NATA IS NEN33+CARTNEHPRATE-X-DATA
    INCISPEDIVERS OCCEPTATA LE DENSUECARTORIS NATERYADATA
  END
END
: HYPSO : PEGIN
  SPLECT FIRST MERCAD FROM
         F+08+HYPSU+DATA+FILE
  ;SSUPPATE := FALSE
  ISSTEST := FOUND
  JUHILE SSTEST ON REGIN
    IF (D+033+CARTC+UPDATE+X+PATA = D+052+HYPSU+LOC+X+DATA)
       (D+034+C4RTO+UPUATF+Y+"ATA = D+053+HYHSU+LPC+Y+DATA)
       THEN BEGIN
      D+052+HYPSO+LOC+x+DATA := D+033+CARTO+UFCATE+Y+DATA
      ID+053+MYPSO+LOC+Y+DATA := 0+034+CAPIC+UPDATE+Y+DATA
      INFUSIONE TELEVALATA := 0.0
      ISSUPPATE := TRUE
      ISSTEST := FALSE
    EAC
```

ELSE "EGIN

```
SELECT NEXT RECORD FROM
                        F+08+4YPSO+DATA+FILE
                 :SSTEST := FALSE
              END
            END (* WHTLF *)
             FIF NOT SSUPDATE THEN BEGIN
              CREATE FAOREHYPSOLDATALFILE RECORD
               IDENSZEHYPSCEL OCEXEDATA := DEN33ECAPTOEHPDATEEXEDATA
               ID+053+HYPSO+LOC+Y+CATA I= D+034+CAPTO+HPDATE+Y+DATA
              ; D+O51+HYPSO+FLEV+DATA := 0.0
            END
          EN:D
        END (+ CASE +1
      END ENDFOREACH
    END;".
       INPUTS:
            DATA:
                   D+028+CARTO+MAP+SECT+NUM+DATA
            FILES
                   F+01+BRIDGE+LOCATIONS+FILE
                   F+02+CARTO+UPDATE+FILE
            FILE:
                   F+03+CITY+LOCATIONS+FILE
             FILF:
                   F+08+HYPSU+DATA+FILE
            FILE
                   F+09+MARSHALL ING+AREAS+FTLE
            FILE:
             FILE:
                   F+28+PRIMARY+RCADS+FTLE
            FILE:
                   F+29+RAIL ROAD+LOCATIONS+FILE
             FILF:
                   F4304HIVER+LOCATIONS4FILE
            FILE: F+31+SFCONDARY+POADS+FILE.
       DUTPUTS:
            DATA:
                    Denze-CARTO-MAR-SECT-NUM-DATA
             (* ANY NUMBER OF CARTO FILES MAY BE UPDATED *)
             FILE:
                    F+01+BPINGE+LOCATIONS+FILE
                    F+03+CTTY+LOCATIONS+FILE
             FILF:
             FILF:
                    F+08+HYPSO+DATA+FILE
                    F+09+MARSHALLING+APEAS+FILE
             FILE:
                    F+28+PPIMARY+RCADS+FTLE
             FILE
             FILE:
                    F+29+RAILROAD+LDCATIONS+FILE
             FILE:
                    F+30+RIVER+LOCATIONS+FILE
            FILE:
                   F+31+SECONDARY+RDADS+FILE.
       TRACED FROM:
             ORIGINATING+REQUIREMENT: ORIG+PEG+NELS+EXTERNAL+INTERFACE.
       REFERRED BY:
             RENET: REZEMODELENELSESENSORESYSTEMERENET.
[RADX COMMAND=
                  DATA ADAPTATION
( *
             3.3
                     This paragraph elaborates upon the
                  processing by detailing the data items by
                  environment, operational function and usage *)
                  LIST THE+ENTITY+CLASSES.
  ENTITY+CLASS: EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC.
        PATE+ENTERED: 20387.
        DESCRIPTION:
  TTHIS CLASS IS COMPOSED OF THE CANDIDATE TARGETS AS
    THEY PASS EACH TEST".
        FNTEPED+RY: "JJF-NFLS".
        ASSOCIATES:
```

```
DATA: DeluneTBDeDATA.
    COMPOSED OF:
          ENTITY-TYPE: ET+10+GROUND+SHADOWING+CANDIDATF+TAPGETS+ET
          ENTITY+TYPE: ET+5+NELS+PRE+BRIFFED+SOI+ET
          ENTITY+TYPE: ETHRANELSAPREABPIFFED+ADIAET
          ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET.
    CREATED BY:
          ALPHA: A+04+TNTTJALIJE+NFLS+ALPHA.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: ORIG+REG+NELS+AOI
          OPIGINATING+REUHIREMENT: OPIG+REQ+NELS+SIGNAL+OF+INTFREST.
ENTITY+CLASS: EC+2+NELS+SCFNARIO+EC.
     DATE+ENTERED: 20382.
     DESCRIPTION: "INFORMATION PERTAINING TO THE NELS SCENARIOM.
     ENTERED+BY: "JJF+NELS".
     ASSOCIATES:
          DATA: De140+TBD+DATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+2+MELS+EMITTER+GPOUND+TRUTH+FT
          ENTITY+TYPE: ET+7+NELS++EATHFR+ET.
     CREATED PY:
          ALPHA: A+04+INTTIALIZE+NELS+ALPHA.
     DESTROYED RY:
          ALPHA: A+24+PERET+NELS+ALPHA.
     TRACED FROM:
          UPIGINATING + PEGITE MENT: UPIG + PEG + NELS + EYTERNAL + INTERFACE
          ORIGINATING+HERHIPEMENT: ORIG+REG+NELS+STGNAL+TO+NDISE.
ENTITY+CLASS: FC+3+NFLS+TASKS+EC.
     DATE+ENTERED: 20392.
     DESCRIPTION: "TASK RELATED INFORMATION".
     FNTEPENGRY: "JJF-NELS".
     ASSOCIATES:
          DATA:
                De140eTBDEDATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+3+NELS+FLIGHT+FT
          ENTITY+TYPE: ET+U+MELS+FREQUENCY+SCAN+FT.
     CREATED RY:
          AL PHA:
                 A+04+INTTTALIZE+NELS+ALPHA.
     DESTROYED RY:
          ALPHA: A+24+PESET+MELS+ALPHA.
     TRACED FROM:
          OPIGIMATING+REQUIREMENT:
          UPICAPEDAGENERATEAPL ATFORMAME ASUPEMENTS
          OPIGINATING+REQUIREMENT: ORIGHPEQ+NELS+ADI
          OPTICINATING + REQUIDENENT: UPTIC+ REC+ LEI S+STGNAL+TO+NOTSE.
ENTITY+CLASS: EC+4+NELS+TH9EAT+EC.
     DATE + ENTERFO: 20382.
     PESCRIPTION:
             MPOTENTIAL NELS-DETECTABLE THREATENING
   TARGETS".
     ENTEREDORY: "JIFONELS".
     ASSUCIATES:
          DATA: 0+140+T80+DATA.
     COMPOSED OF:
          ENTITY+TYPE: ET+1+VELS+EMISSION+THREAT+ET.
```

CREATED BY: ALPHA: A+04+INTITAL [78+NFLS+ALPHA. PESTROYED BY: ALPHA: A+24+RESET+NELS+ALPHA. TRACED FROM: ORIGINATING+REQUIREMENT: URIG+REQ+NELS+THREAT+TAPLE+HPDATE ENTITY+CLASS: EC+5+NFLS+VEHICLE+CHARACTERISTICS+FC. PATE+ENTERED: 20382. DESCRIPTION: "VEHICLE CHARACTERISTICS". FNTEREDORY: "JJF-NFLS". ASSOCIATES: DATA: "+140+THD+DATA. COMPOSED UF: ENTITY+TYPE: ET+6+NELS+VEHTCLE+CHARACTFRISTICS+ET. CREATED BYE ALPHA: A+OU+INTITAL IZE+NFLS+ALPHA. DESTRUYED RYS ALPHA: A+244FESET+MELS+4LPMA. TRACEL FROM: OPIGINATING+REQUIPEMENT: UPIG+PEQ+N: S+EYTFRNAL+INTERFACE. (RADY COMMANDS LIST THE FENTITY FTYPES. ENTITY + TYPE: ET+10+GPOUND+SHADOWING+CANDIDATE+TARGETS+FT. PATE + EMITE PEDI 22263. [ESCRIPTION: *CARPIES THOSE TARGETS WHICH PASS THE GPOUND SHAPOWING TEST*. ENTEPEC+PY: "JOURS". ASSOCIATES: FILF: F+10+NFLS+CANDIDATE+TARGETS+FILE FILE: F+12+DETECTED+CAMDIDATE+TARGETS+FILE. COMPOSES: -EMTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSTON+BREAKOUT+EC. TRACED FROM: ORIGINATING + REQUIREMENT: UPIG + REC+METS + EMITTER + DEFAULT. ENTITY TYPE: ET+11+DETECTED+EMTSSIDNS+DU+TDUA+ET. PATE + ENTERFOR 22283. DESCRIPTION: MHULDS EMITTER DATA THAT HAS GOLF THROUGH TOUA, AND DO PROCESSING". FNTFRED+RY: "JDUBHS". ASSOCIATES: FILE: F+17+NFLS+FSTIMATED+FMITTER+PAPAMETL95+FILE FILE: F+18+NFLS+FSTIMATED+GROUND+TPUTH+FILE. 10MPOSES: EMTITY+CLASS: FC+6+OFTFCTED+FMISSIONS+THFO+FC. TRACED FROM:

ENTITY+TYPE: ET+12+DETECTED+FMT5910N9+CD4PSE+ET.

PATE+ENTERED: 22383.

DESCRIPTION:

#4ULUS FMTTTER DATA THAT HAS GONE TPHOUGH

OPIGINATING+REQUIPEMENT: OPIG+REQ+NELS+TARGET+ACCUTSTITON.

```
THE COARSE LOCATING FUNCTION".
    ENTERED+RY: "JOURHS".
     ASSOCIATES:
          FILE: F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE
          FILE: F+18+NELS+FSTIMATED+GROUND+TRUTH+FILE.
    COMPOSES:
          ENTITY+CLASS: FC+6+DETFCTED+FMISSIONS+INFO+EC.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          URIGOREDONEL SOCOARSE OANDOF INE LOCATION.
ENTITY+TYPE: ET+13+DETECTED+EMISSIONS+FINE+ET.
     DATE + ENTERED: 22383.
     DESCRIPTION:
*HOLDS EMITTER DATA THAT HAS GONE THROUGH
THE FINE LOCATING FUNCTION".
     ENTERED+BY: "JDUBSS".
     ASSOCIATES:
          FILE: F+17+NFLS+FSTIMATED+FMITTER+PARAMETERS+FILE
          FILE: F+18+NFLS+FSTIMATEN+GROUND+TPUTH+FILE.
     COMPOSES:
          ENTITY+CLASS: FC+6+OFTFCTED+EMISSIONS+INFU+EC.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          ORIGOREDONEL SOCOADSPONDOFINE LOCATION.
ENTITY HTYPE: ETHICHEL SCENISSION CTHEEATHET.
     DATE+ENTEREUS 20382.
     DESCRIPTION: "NELS-DETECTED THREATS".
     ENTEREP+FY: "JJF-NELS".
     ASSOCIATES:
          FILE: F4134NFLS4FMISSION+THREAT+TAPLF4FILE.
     COMPOSES:
          ENTITY+CLASS: FC+4+NFLS+THPEAT+EC.
     TRACED FROM:
          OPIGINATING+REGHIREMENT: ORIGHPECHNELS+THEFAT+TAPLF+HPDATE
     PEFFRHED BY:
          SUBNET: S+3+MODEL+NELS+GPS+PPDCESSINC+SUC.
ENTITY + TYPE: ET+2+NEL SHEMITTER+GOCHNO+TRUTH+FT.
     PATEMENTEREUS 20382.
     DESCRIPTION: "MELS EMITTER GROUND ACTIVITY".
     ENTEREDORY: "JUF-NELS".
     ASSOCIATES:
          FILE: F+14+NFLS+FMITTEP+ACTIVITY+GPGUNT+THUTH+FILE.
     COMPOSES:
          ENTITY+CLASS: FC+2+NELS+SCFNARIO+EC.
     TRACED FROM:
          ORIGINATING+REGNIREMENT: UMIGHPECHMELS+EXTERNAL+INTEMPACE.
     REFERRED HYS
           SUBMET: SESEMONEL EMEL SESEMSUPESUF.
ENTITY + TYPE: ET+3+NELS+FLIGHT+FT.
     DATE+ENTERFU: 20382.
     DESCRIPTION: "FLIGHT WAYPOINTS".
     FNTEDER+RY: "JJF+HFL "".
     ASSOCIATES:
```

FILE: F+06+FLIGHT+PROFILE+FILE

```
FILE: F+27+PLATFORM+CONTROL+FILE.
    COMPOSES:
         EMTITY+CLASS: FC+3+NFLS+TASKS+EC.
     TRACED FROM:
          ORIGINATING + HFUHIPEMENT:
          ORIGHREU-GENERATE+PLATFORM+MEASUREMENTS.
    REFERRED BY:
          RENET: REZEMODELENELSESEMSORESYSTEMEPEMET
          SUBNET: S+1+CHFCK+NELS+SENSUP+STATUS+SUB
          SUBPET: S+4+MODEL+NELS+PLATFORM+SUR.
ENTITY + TYPE: ET+4+HELS+FREQUENCY+SCAN+ET.
    DATE + ENTERED: 20382.
    DESCRIPTION: "FREQUENCY TO TUNE NELS TRIAD TO".
    ENTERED+RY: "JJF-HFLS".
     ASSOCIATES:
          FILF: F+19+NFLS+FRFOLENCY+SCAN+FILF.
     COMPOSES:
         ENTITY+CLASS: FC+3+NFLS+TASKS+FC.
     TRACED FROM:
         ORIGINATING CHENNIREMENT: UPIGCHER CHNELS + SIGNAL COFFILTEREST.
    REFERRED BY:
          RENET: REZEMODELENELSESENSORESYSTEMERENET.
ENTITY + TYPE: ET+5+HELS+PRE+HRIEFFD+SDI+ET.
    PATE+ENTERFUL 20382.
    DESCRIPTION:
*CARRIES NELS SOI DATA TO SOI ALPHA AND HOLDS THOSE
TARGETS WHICH PASS THE SOT TEST".
     ENTERED+BY: "JJF+NELS".
     ASSOCIATES:
          FILE:
                F+10+NELS+CANDIDATE+TAPGFIS+FILE
          FILE: F+21+NELS+PRE+BRIEFED+SOI+FILE.
    COMPOSES:
         ENTITY+CLASS: FC+1+NFLS+DETECTABLE+EMISSTON+ARFAMONT+EC.
     TRACED FROM:
         ORIGINATING+HEQUIPEMENT: ORIGHRECHNELS+STGNAL+OF+INTEREST.
    REFERRED BY:
          RENET: REZEMODELENELSESENSORESYSTEMERENET
          SUBNET: S+1+CHFCK+MELS+SENSDR+STATUS+SUB
          SUBNET: S+5+MOREL+MELS+SENSOR+SUP.
ENTITY-TYPE: ET+6+MELS+VFHTCLE+CHAPACTFHISTICS+ET.
     DATE+ENTERED: 20362.
     DESCRIPTION: "VEHICLE EMISSION CHARACTERISTICS".
     FNTEREDORY: "JJF-NFLS".
     ASSOCIATES:
          FILE: F+15+NELS+FMITTER+CHAVACTERISTICS+FILE.
     COMPOSES:
          ENTITY+CLASS: FC+5+NFLS+VEHICLE+CHARACTERISTICS+FC.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+VELS+EYTERMAL+INTERFACE.
     PEFERRED BY:
                  S+5+MODEL+MELS+SENSOR+SUR.
          SUBNET:
ENTITY TYPE: ET+7+NELS+HFATHFR+ET.
```

PATE+ENTERED: 20382.

```
DESCRIPTION: "WEATHER INFORMATION".
       FNTEPEDARY: "JJF-NELS".
       ASSOCIATES:
            FILE: FARAANFLEHWEATHERACONDITIONSAFILE.
       COMPOSES:
            EMTITY+CLASS: FC+2+NFLS+SCFHARTG+EC.
       TRACED FROM:
            OPIGINATING+REGHIPEMENT: OFIG+PER+NELS+SIGHAL+TO+NOISE.
       PEFERRED BY:
            SHBNET: S+5+MODEL+NELS+SENSOR+SUP.
  ENTITY + TYPE: ET+A+MELS+PRE+BRIEFED+ANI+ET.
       DATE+ENTERED: 22263.
       DESCRIPTION:
  "CAPRIES VELS AND DATA TO AND ALPHA AND HOLDS THOSE
   TARGETS WHICH PASS THE ANI TEST".
       FATERED+RY: "JOUBBS".
       ASSOCIATES:
            FILE: F+10+NELS+CANDIDATF+TARGETS+FILE
            FILE: F+20+NFLS+PRF+PRIEFED+ADI+FILE.
       COMPOSES:
            ENTITY+CLASS: FC+1+NFLS+DETECTABLE+EMISSION+RREAKONI+EC.
       TRACED FROM:
            OPIGINATING + REQUIREMENT: OPIG+REC+NELS+AGI.
       REFFERED BY:
            RENET: REZEMODELENELSESENSORESYSTEMEDENET
            SUBNET: S+1+CHECK+NELS+SFNSOR+STATUS+SUB
            SUBNET: S+5+MODEL+NELS+SFNSGR+SUR.
  ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET.
       PATE+ENTFRED: 22283.
       DESCRIPTION: "CAPRIES THOSE TARGETS WHICH PARS THE SIN TEST".
       ENTEREDARY: "JOURAS".
       ASSOCIATES:
            FILE: F+10+NELS+CANDIDATF+TARGETS+FILE.
       COMPOSES:
            ENTITY+CLASS: FC+1+NFLS+DETECTABLE+EMISSTON+ARFAKOUT+EC.
       TRACED FROM:
            ORIGINATING+REQUIPEMENT: OPIG+REG+NELS+EMITTEK+DEFAULT.
       REFERRED BY:
            SHRNET: S+5+MONEL+NELS+SENSOR+SUR.
TRADY COMMANDS
                 LIST THE+DATA.
_____
  DATA: D+001+ALTITUDE+WEATHER+LDC+DATA.
       DATE - ENTERED: 11182.
       DESCRIPTION: "MEATHER INFORMATION AT VARIOUS ELEVATIONS".
       ENTEREDORY: "JJF-NELS".
       INCLUDES:
                   D+038+CONDITIONS+AT+ELEVATION+WEATHER+DATA
            DATA:
            DATA: De039+ELFVATION+WEATHER+DATA.
       CONTAINED IN:
            FILE: F+26+NELS+WEATHER+CUNDITIONS+FILF.
       TRACED FROM:
```

OPIGINATING+REWHIREMENT: URIG+PEP+NELS+SIGMAL+TU+NPISE.

```
D+002+ASET+MSG+DEST+DATA.
DATAL
    DATE+ENTERED: 90481.
    DESCRIPTION: "DESTINATION OF MESSAGE".
     ENTERED+BY: "JJF-TC",
     RANGE: "TC, ES, ASE, MTT, C31, NELS, WELS, IS, TC+OPERATOR".
     TYPE: ENUMERATION.
     USF: BOTH.
     INCLUDED IN:
          DATA: C+003+ASFT+MSG+ID+DATA.
     TRACED FROM:
          DECISION: DECISION+MESSAGE+ROUTING+METHOD.
DATA: D+003+ASET+MSG+ID+DATA.
     DATE+EMTERED: 92481.
     DESCRIPTION: "CONTAINS MESSAGE IDENTIFICATIONS".
     FNTERED+BY: "JJF-TC".
     PANGEI
    *MN+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA.
     MN+02+NELS+CARTO+UPDATES,
     MN+03+NELS+COMMANDERS+REQUIRFMENTS,
     MN+04+NELS+MODIFIED+TASK,
     MN+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS.
     MN+05+NELS+QRBTT+MODIFICATIONS,
     MN+07+NELS+PLATFORM+1 OCATION+REPORTS.
     MN+08+NELS+PRIORITIZED+SENSUR+DIRECTIONS.
     MN+09+HELS+REQUESTFU+SENSOR+DATA,
     MN+10+MELS+SENSOP+REQUESTS.
     MN+11+NELS+SENSUR+SYSTEM+STATUS,
     MN+12+NEUS+SURVETLLANCF+TAPGET+REPORTS,
     MN+13+NELS+TASKING+RESPONSES.
     MN+14+NELS+TPACK+MESSAGE.
     MN+15+T+AND+C+STOP+NFLSM.
     TYPE: FNUMFFATTON.
     INCLUDES:
                 D+007+ASFT+MSG+DFST+DATA
          OATA:
                 Denouse ASETEMSGENAME + PATA
          DATA:
          DATA: O+005+ASFT+MSG+SQURCE+DATA.
     VAKES:
          MESSAGE: MODIOESONELSOUNTTOANDOENVERPOMENTOUATAOMSGOIN
          MESSAGE:
                   M+02+NELS+CARTC+UPCATES+MSG+IN
          MESSAGE:
                   -M+03+NELS+CCMMANDERS+PERUTPFMENTS+MSG+IN
          MFSSAGE:
                   M+04+NELS+MCDIFIED+TASK+MSG+TN
          MESSAGE:
                   -M+05+MELS+NCN+SURVEILLANCF+TAPGFT+REPORTS+MSG+DHT
                   M+06+MELS+OFFIT+MODIFICATIONS+MSG+IN
          1FSSAGE:
          MESSAGE:
                   - MOUTONELSOPLATEDRANDLOCATIONOREPORTSOMSGOUT
                   HORENELSEPFIORITIZEDESENGOPEDIRECTIONSEMSGEIN
          MESSAGE:
          MESSAGE: MEDGENELSEREQUESTEDESENSOREMATAEMSGEIV
          MFSSAGE:
                   - M+10+NELS+SFNRQP+PEQUESTS+MRG+OHT
          MESSAGE: MELLENELSESENSURESYSTEMESTATUSEMSGEDUT
                   MELSES RVETLL ANCESTARGETERPORTS + MSG + OUT
          MESSAGE
          MESSAGE:
                   - M+13+NELS+T4SKING+FESPONSES+MSG+OUT
          MESSAGE: METHENELSETPACKEMESSAGEEMSGEDUT
          MESSAGE: MAINATHANDACASTOPANELSAMSGATN.
     CUTPUT FROM:
          ALPHA: A+09+NELS+MAKF+3E"SOR+REQUESTS+ALPHA
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA: A+13+VELS+PLATFORM+LUCATION+MSG+ALPHA
          ALPHA: A+17+NELS+SENSUP+STATUS+ALPHA
```

ALPHA: A+20+NEI S+SURVEILLANCF+AND+TRACK+MSGS+ALPHA. TRACED FROM: DECISION: DECISION+MESSAGE+ROUTING+METHUD. DATA: D+004+ASET+MSG+NAMF+DATA. DATE+ENTERED: 90481. DESCRIPTION: "NAME OF MESSAGE". ENTEREPHRY: "JUF-TC". RANGES MMN+01+ES+NELS+UNIT+AND+FNVIRONHFNT+DATA, MA+02+NFLS+CARTO+UPDATES, MN+03+NFLS+COMMANDERS+RFWHIREMENTS, MN+04+NFLS+MUDJFJFU+TASK, MA+05+NELS+NON+SUFVEILLANCE+TARGET+FEPORTS. MA+Ob+NFLS+ORALT+MODIFICATIONS, MN+07+NELS+PLATFURM+LOCATIO***REPURTS. MA+08+NFLS+PRIORITI7ED+SENSOR+DIRECTIONS, MA-09-NELS-REDUFSTED-SENSOR-04TA. MA+10+NELS+SENSOP+REQUESTS, MINITED SE USON SYSTEM STATES. MN+12+NFLS+SUPVFILLANCE+TARGET+GEPHATS. MA+13+NFLS+TASKING+PESPONSES, MN+14+NELS+TRACH+MFSSAGF, MN+15+T+AND+C+STUP+MELSH. TYPE: FNUMPRATTON. USE: BOTH. THICKUDED I'VE DATA: POPOSOASETOMSGOIDODATA. THACED FROME DECISION: DECISION+MESSAGE+HOUTING+METHOD OFCISION: MIGHEY+SUSPECT+ITEH. PEFERHED HY: RENET: REZEMBOFLENELSESE"SORESYSTE"EPENET. BATA: DADOSHASETAMSGASDURCEADATA. DATE+ENTERED: 90481. DESCRIPTION: "SOURCE OF DESSAGE". ENTEREDORY: "JJF-TC" PANGE: "TO, ES, ASE, "TT, CSI, SELS, WELS, IS, TO MOFERS TOR". TYPE: ENUMERATION. USF: MOTH. INCLUDED IN: DATA: PHOOSEASPIEMSGEINEDATA. TRACED FROM: DECISION: DECISION + MESSAGE + ROUTING + METHOD. DATA: P+006+ASP+ACCELERATION+DATA. DATE+ENTERFOR 11182. DESCRIPTION: "ASP ACCELERATION VECTOR". FNTERETHE : "JIF-HELS". INCLUUF 31 DATA: "+007+A3P+ACC+Y+DATA DATA: POOROASPOACCOYODATA DATA: PHOGO-ASPEACE+7+DATA. INCLUDED IN: DATA: D+C20+ASP+STATF+VECTOR+DATA. TRACED FRUIT URICIMATING #REGUIREMENT:

ORIGOREROGENERATEOPLATFORMOMEASUREMENTS.

```
DATAL D+007+ASP+4CC+X+DATA.
    DATE+ENTERED: 11182.
     DESCRIPTION: "X ACCÉLERATION".
     FNTERED+RY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
                D+006+ASP+ACCELERATION+DATA.
          DATAL
     TRACED FROM:
          ORIGINATING+REGUIREMENT:
          URIGHREGAGENERATEAPLATFORMAMEASUREMENTS.
UATA: D+008+ASP+ACC+Y+DATA.
     DATE+ENTERED: 11162.
     DESCRIPTION: MY ACCELERATION".
     FATERED+RY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     THELUDED IN:
          DATA: 0+006+ASP+ACCELERATION+DATA.
     TRACED FROM:
          OPIGINATING + REQUIPEMENT:
          ORIGORE TO GENERATE OF LATEOR TO ME ASUREMENTS.
DATA: D+009+ASP+ACC+Z+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION: "7 AUCELEPATION".
     ENTEREDORY: "JJF-NFLS".
     TYPE: WEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+006+ASP+ACCELEPATION+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT:
          OPIG+REM+GENERATE+PLATFORM+MEASUREMENTS.
DATAL NOOLOWASPHALTITURE+UATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "ALTITUDE OF ASP".
     ENTEREPORY: "JUF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+27+PLATERRM+CONTROL+FILE.
     INCLUDED IN:
          DATAL D+013+ASP+LOCATION+DATA.
     TRACED FROME
          ORIGINATING+REDUIPEMENT: OPIG+RED+GFMEPATE+IPS.
DATA: DECLIFASPEATTITUDE+DATA.
     NATE+ENTERED: 11162.
     DESCRIPTION: "ATTITUDE OF ASP".
     ENTEREDORY: "JUF-NELS".
      INCLUDES:
                  Denise ASPEPITCHENATA
           DATAS
```

DATAL Denigeaspepolledata

```
DATA: De025+ASP+YAW+DATA.
      INPUT TO:
           ALPHA:
                   A+01+0MF+INS+NOTSF+RENEPATION+ALPHA
           ALPHA:
                   A+05+ "EL S+AREA+OF+INTEREST+FIL TER+ALPHA
           ALPHA!
                  A+07+HELS+FINF+LOCATION+ALPHA
           ALPHA:
                   A+18+MELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
           ALPHAS
                   A+19+NELS+SIGNAL+TO+NOISE+DETFCTARILITY+ALPHA
           ALPHAT A+21+NELS+TARGET+ACOUTSITION+ALPHA
           ALPHA: A+22+NELS+TERGAIN+FOLIAGE+SHADOHING+ALPHA.
     OUTPUT FROM:
           ALPHA: A+01+DMF+INS+NOTSF+GENEPATION+ALPHA
           ALPHA: A+03+GENERATE+INS+ALPHA.
      TRACED FROM:
           OPIGINATING+REGNIPEMENT: URICHRECHGEMERATEHINS.
DATA: D+012+ASP+LATITUDE+DATA.
     DATE+ENTERED: 11162.
     PERCPIPTION: "LATITURE OF ASON.
     FNTEREDOPY: "JJF-NFLS".
     TYPE: PEAL.
     USF: HOTH.
     INCLUDED I'M
          DATA: I +013+45P+LUCATION+DATA.
     TRACED FRUME
          UPICINATINGERF MIREMENT: UPICEMENTENERATERINS.
DATA: TECTSEASPEL OCATIONALIATA.
     PATE+ENTERFUE 11182.
     DESCRIPTION: "GEOGRAPHIC LOCATION OF ASPH.
     FNTEREDORY: "JA - SPERM.
     INCLUMES:
                 MANIONASPHALTITUME+DATA
          UATAI
          OATA:
                 "+012+AST+LATITUDE+DATA
                 C+017+4SP+LOFGTTHDF+DATA.
          UATAI
     INPUT TUE
          ALPHA: A+01+PMF+TNS+NUTSF+GENERATION+ALPHA
          AL PHA:
                 A-USANEI SAAFE AANFAINTEPESTAFILTENAAL PHA
          AI PHAT
                 A + 0.7+MEI S+FTNF+LOCATION+ALPHA
          AL PHA:
                 APTRONEL SESTON ALEMPETNIFHESTERIL TEREAL PHA
                 A+19+4ELS+SIG AL+TH+MPISE+DFTFCTABILITY+ALPHA
          ALPHAI
          AL PHAT AFELFUEL STARRETFACOUISTITOMENERHA
          A: PHA:
                 A+22+MELS+TERFATM+FOLTAGE+SHAPGWING+ALPHA.
     OUTPUT FROM:
          ALPHA: A+01+DMF+INS+NUISF+GEMERATION+ALPHA
          ALPHAT AFUSEGENERATE + INS + ALPHA.
     THACED FROM:
          ORIGINATING+RENNIREMENT: UPIC+PEC+CENERATE+INS.
DATAL DEGLARASPELOCEXEDATA.
     PATE+ENTFRED: 11182.
     DESCRIPTION: "Y POSITION OF ASP".
    ENTEREPHAY: "JJF-NFLA".
     TYPE: REAL.
    USF: BOTH.
    CONTAINED IN:
          FILE: F+27+PLATEORM+CONTROL+FILE.
     INCLUDED IN:
         DATA: D+020+4SP+STATE+VECTOR+DATA.
```

TRACED FROM:
ORIGINATING+HEGNIPEMENT: ORIGHREDAGENERATE+DME.

DATA: P+015+ASP+LOC+Y+DATA.

DATF+ENTERED: 11182.

DESCPIPTION: MY POSITION OF ASPM.

FNTERED+PY: "JOF=NFLS".

TYPE: REAL.

USF: BOTH.

CONTAINED IN:

FILE: F+27+PLATFORM+CONTPOL+FILE.

TNCLUDED IN:

DATA: P+029+ASP+STATE+VECTOR+DATA.

TRACED FROM:

OPICINATING+KEBHIPEMENT: OPIG+REQ+GENEPATL+DME.

DATA: D+016+ASP+LOC+Z+DATA.

DATE+ENTERED: 11182.

DESCRIPTION: "Z POSITION OF ASP".

ENTEPED+RY: "JJF=NELS".

TYPE: PEAL.

USE: BOTH.

CONTAINED IN:

FILE: F+27+PLATFORM+CONTROL+FILE.

INCLUDED IN:

DATA: D+020+ASP+STATE+VECTOR+DATA.

TRACED FROM:

URIGINATING+REQUIREMENT: ORIG+REQ+GENERATE+DME.

CATA: D+017+ASP+LONGITUDE+PATA.

CATE+EMTERED: 11182.

DESCRIPTION: "LONGITUDE OF ASP".

FNTERED+RY: "JJF=NELS".

TYPE: REAL.

USF: BOTH.

INCLUDED IN:

UATA: D+013+ASP+LOCATION+DATA.

TRACED FROM:

ORIGINATING+REQUIREMENT: ORIG+RER+GENEPATE+INS.

DATA: D+018+ASP+PITCH+DATA.

DATE+ENTERED: 11182.

DESCRIPTION: "PITCH OF ASP".

ENTERED+RY: "JJF=NELS".

TYPE: REAL.

USF: BOTH.

INCLUDED IN:

DATA: D+011+ASP+ATTITUDE+DATA.

TRACED FROM:

OPIGINATING+REQUIREMENT: ORIG+REQ+GENEPATE+INS.

DATA: D+019+ASP+ROLL+DATA.

DATE+ENTERED: 11182.

DESCRIPTION: "RULL OF ASP".

ENTEPEN+RY: "JJF-NELS".

TYPE: REAL.

USE: BOTH.

TNCLUDED IN:

DATA: D+011+ASP+ATTITUDE+DATA. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+RED+GENERATE+INS. DATA: D+020+ASP+STATE+VECTOR+DATA. DATE+ENTERED: 11182. DESCRIPTION: "TIME POSITION AND VELOCITY OF AN ASP". ENTEREDORY: "JJF-NELS". INCLUDES: DATA: Deno6+ASP+ACCELERATION+DATA DATA: Deniueaspelocexedata DATAL De015+ASP+LOC+Y+DATA DATA: D+016+4SP+LOC+7+DAT4 :ATAC D+021+ASP+TIME+DATA TATAL D+022+ASP+VEL+X+DATA DATAS D+023+ASP+VEL+Y+DATA DATA: D+024+ASP+VEL+Z+DATA. INPUT TO: ALPHA: A+01+DME+TNS+NOTSE+GENERATION+ALPHA ALPHA: A+03+GEMERATE+INS+ALPHA ALPHA: A+05+NELS+APEA+OF+INTEREST+FILTER+ALPHA ALPHA: A+07+NELS+FINE+LOCATION+ALPHA ALPHA: A+13+NELS+PLATFORM+LOCATION+MSG+ALPHA ALPHA: A+17+NELS+SENSOP+STATUS+ALPHA ALPHA: A+18+NELS+SIGNAL+OF+INTERFST+FILTER+ALPHA ALPHA: AF196NELSESIGNALETUENDISEEDETECTARILITYEALPHA ALPHA: A+21+NELS+TARGET+ACOUISTTION+ALPHA ALPHA: A+22+'ELS+TERGATN+FOLIAGE+SHADOWING+ALPHA. CUTPUT FROM: ALPHA: A+01+DME+INS+NOISF+GENERATION+ALPHA ALPHA: A+02+GENEPATE+UME+ALPHA. TRACED FROM: OPIGINATING+REQUIREMENT: ORIG+PEO+GENERATE+DME. DATA: 0+021+45P+TIME+DATA. DATE+ENTERED: 11187. DESCRIPTION: "TIME POSITION READING IS MALE". FNTERED+RY: "JJF-NFLS". TYPE: FEAL. USF: BOTH. INCTHDED IN: DATA: Denaneuspestate+vectoredata. TRACED FROM: URISINATING+REGUIPEMENT: OFICHRECHCEMEPATE+DME. DATA: D+022+ASP+VEL+X+DATA. PATE+ENTERED: 11187. reschiption: "x velocity of asp". FATEFED+RY: "JJF-NFLS". TYPE: PEAL. HSF: BOTH. FORTAINED INT FILF: F+27+PLATFORM+CONTRUL+FILE. INCTINED IN: DATA: D+020+ASP+STATE+VECTOR+DATA. TRACED FROM: OPICINATING + REGOIREMENT: CPIC+REC+CEMERATE+DME.

```
DATAL D+023+ASP+VEL+Y+DATA.
       DATE+ENTERED: 11182.
       DESCRIPTION: "Y VELOCITY OF ASP".
       ENTEREDORY: "JJF-NELS".
       TYPE: REAL.
       USF: BOTH.
       CONTAINED IN:
            FILE: F+27+PLATFORM+CONTROL+FILE.
       INCLINED IN:
            DATA: D+020+ASP+STATF+VECTOR+DATA.
       TRACED FROM:
            DRIGINATING CHERHITEPMENT: ORIGERED CRATE COME.
  DATAL DANZULASPAVELAZATA.
       DATE+ENTERFO: 11182.
       DESCRIPTION: "7 VELOCITY OF ASP".
       FNTEREDORY: "JJF-NFLA".
       TYPE: PEAL.
       USE: BOTH.
       CONTAINED THE
            FILE: F+27+PLATFORM+CONTROL+FILE.
       INCLUDED IN:
            DATA: DANZOLASPASTATE + VECTOR+DATA.
       TRACED FROM:
             ORIGINATINGERFUNIRFPENT: ORIGEREGEGERATEEUME.
  DATAL DEDZSEASPEYAMEDATA.
       DATE+ENTEREU: 11182.
       DESCRIPTION: "YAW OF ASP".
       FNTERED+GY: "JJF-NFLC".
       TYPE: REAL.
       USF: BOTH.
       INCLUDED IN:
            DATA: Denileaspeattitungenata.
       TRACED FROM:
            ORIGINATING+HERRIPENENT: OPIG+REC+GENERATE+INS.
  DATA: DADZO+CARTU+SECTION+NUN+DATA.
       DATE+ENTERED: 10482.
       DESCRIPTION: "CAPTOGRAPHIC SECTION NUMBER".
       ENTEREDORY: "JJF-NFLS".
       TYPE: INTEGEF.
       HISE: BOTH.
       ORDERS:
             FILE: F+02+CARTO+UPDATE+FILE.
       CONTAINED THE
            FILF: F+02+CARTU+UPDATE+FILE.
       TRACED FROM:
             UPIGINATING+RENHIREMENT: UPIG+REO+MELS+EXTERNAL+INTERFACE.
  DATAL DOGGECARTO-PPRATE-1-DATA.
       DATE+ENTERED: 10962.
       DESCRIPTION: "PRESENTLY UNKNOWN UPDATE ITEM".
       ENTEREDORY: "JIF-HELS".
       PANGES
MBPINGE, PATERDAD, PARMAN, SARMAD, CITY, PIVER, MARSHALL THE, MYRSHM.
        TYPE: FNUMERATION.
       USF: BOTH.
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CONTAINED INT
             FILF: F+02+CARTO+UPDATE+FILE.
        TRACED FROM:
             ORIGINATING+REQUIREMENT: URIG+RED+NELS+EXTERNAL+INTERFACE.
  DATA: D+031+CARTD+UPDATE+2+DATA.
       DATE+ENTERED: 10887.
       DESCRIPTION: "PRESENTLY UNKNOWN UPDATE ITEM".
        ENTEREPORY: "JUF-NELS".
        PANGE :
"BRINGE, PAILROAD, P+RMAD, S+ROAD, CTTY, RIVER, MARSHALLING, HYPSO".
        TYPE: ENUMERATION.
        USE: BOTH.
        CONTAINED IN:
             FILE: F+02+CARTO+UPDATF+FILE.
        TRACEU FROM:
             ORIGINATING+REQUIPEMENT: ORIG+REG+NETS+EXTERNAL+INTERFACE.
  DATA: D+032+CARTO+UPDATE+3+DATA.
        DATE+ENTERED: 10882.
        DESCRIPTION: "PRESENTLY UNKNOWN HPPATE ITEM".
        FNTERED+RY: "JJF-NFLR".
        PANGE !
MARIDGE, RATERUAD, PARGAD, SARUAD, CTTY, RIVER, MARSHALLING, MYPSOM.
        TYPE: ENUMERATION.
        USF: BOTH.
        CONTAINED IN:
            FILE: F+02+CARTD+UPDATF+FILE.
        TRACED FROM:
             ORIGINATING+REGULTREMENT: URIGHREGHNELSHEXTERMALHTATEPFACE.
  DATA: DAGGERAPTCAPTCHUPDATEAXADATA.
        DATE+ENTERED: 10862.
        DESCRIPTION: "X COORDINATE OF CARTOGRAPHIC FRATURE".
        FNTEREDORY: "JUF-NFLS".
        TYPE: REAL.
        USF: BOTH.
        CONTAINED IN:
             FILE: F+02+CARTO+UPDATF+FILE.
        TRACED FROM:
             ORIGINATING AREQUIREMENT: URICAPEDANELSALYTENNALATATEPEACE.
   DATAL DECSUECARTGEDPOATERYEDATA.
        DATE+ENTERED: 10982.
        DESCRIPTION: "Y COOKDITATE OF CARTOGRAPHIC FRATORE".
        FNTERED+RY: "JJF-NELS".
        TYPE: REAL.
        HSE: BOTH.
        CONTAINED IN:
            FILF: F+02+CARTO+UFD4TF+FILE.
        THACED FROM:
             ORIGINATING GREGHIREMENT: ORIGERE REMELS GEXTERNAL GINTERFACE.
   DATAL NOOST+CLOUD+COVER+DATA.
        DATE+ENTERED: 11182.
        DESCRIPTION: "CLOUD CUVEP".
        FNTERED+RY: "JJF+NFLS".
        RANGEL
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"CLEAR, PARTLY+CLOUDY, MOSTLY+CLOUDY, OVERCAST, FORGY, SMOG, DUST".
        TYPE: ENUMERATION.
        USF: BOTH.
        INCLUDED IN:
             DATA: Densate CONDITIONS - ATTELF VATION - WEATHER + DATA.
        TRACED FROM:
             URIGINATING+REQUIREMENT: URIG+REQ+NELS+STGNAL+TD+NOISE.
   DATA: DADSA+CONDITIONS+AT+FLFVATTON++EATHER+DATA.
        DATE+ENTERED: 11182.
        DESCRIPTION:
                "CLOUD COVER AND PRECIPITATION DATA AT A SPECIFIC
      ALTITUDE".
        FATERED+BY: "JJF-NFLS".
        INCLUDES:
                   Dens7ecLoudecuveredata
             DATA:
             DATA: De120+PRECIPITATION+DATA.
        INCLUDED IN:
             DATA: D+001+ALTITUDE+NFATHER+LOC+UATA.
        TRACED FROM:
             ORIGINATINGEREQUIREMENT: ORIGEREGENELSESTGMALETOENDISE.
  DATA: DAGGAFLEVATIONAMENTHERADATA.
        DATE+ENTERED: 11162.
        DESCRIPTION: "FLEVATION".
        ENTEPED+RY: "JJF-NFLS".
        TYPE: REAL.
        UNITS: METERS.
        HSE: HOTH.
        INCLUDED IN:
             DATA: D+001+ALTITUFF+WEATHER+LCC+D4TA.
        TRACED EROMS
             URIGINATING CHEGOIPEMENT: OPIGCRED CHECK SESTONAL CTOCKNOISE
  DATA: 0+040+FIRST+CMDR3+RED+UPCATE+UATA.
        PATE+ENTERFO: 91581.
        DESCRIPTION: "A COMMANDERS REQUIREMENT UPDATE MESSAGE EUCATION".
        FNTEPED+BY: "U HARTSCHUH".
        PANGE: "IN+AREA, OUTSTOF+AREA".
        TYPE: ENUMERATION.
        HSE: BOTH.
        CONTAINED IN:
             FILE: F+04+CMDFS+DATA+TO+UPDATE+FILE.
        TRACED EROM:
             DECISION: CUNTENTS+OF+MESSAGE.
   DATA: D+041+FLIGHT+ NAYPUTNT+X+CATA.
        DATE+ENTERFOI 11182.
        DESCRIPTION: "FAST-WEST DISTANCE".
        FNTEGED+RY: "JJF-NFLS".
        TYPE: PESL.
        USE: BOTH.
        CONTAINED IN:
             FILE: F+06+FLIGHT+PRCFILE+FILE.
        TRACED FROM:
             URIGINATING #REDUIREMENT:
             UPIGERFREGENERATE + PLATFORM + MEASUREMENTS.
```

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DATA: DAGGRAFFLIGHTAWAYPOINTAYADATA.
     DATE + ENTERED: 11182.
     DESCRIPTION: "WOOTH/SOUTH FISTANCE".
     FRITEREDORY: "JUF-HELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: FOR6-FLIGHT-PROFILE-FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          DOIGHRED + GENERATE + PLATFORM + MEASURE MENTS.
DATA: D+043+FLIGHT+WAYPOINT+7+CATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "FLEVATION".
     TYPE: PEAL.
     UNITS: METERS.
     USE: BOTH.
     CONTAINED INS
          FILE: F+06+FLIGHT+PRCFILE+FILE.
     THACED FROM:
          OPIGINATING+REQUIREMENT:
          OPIGERECEGENERATE + PLATFORM + MEASUREMENTS.
DATA: DACAUAFREQUENCYASCANAPARAMETERADATA.
     DATE + ENTERED: 91581.
     DESCRIPTION: "SCANING PARAMETER FOR A FREQUENCY".
     ENTEPED+BY: "D HARTSCHUH".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+34+SFNSUP+STATUS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+SENSOR+ACTIVITY+FLEMENTS
DATA: D+046+GROUND+TARGET+FREQUENCY+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION:
             "INELS, WELS ONLY) FREQUENCY OF EMISSION OF GROUND
   TARGET".
     FNTEPED+RY: "JJF=NELS".
     TYPE : REAL.
     HATTS: HEPTZ.
     HISF: HOTH.
     "AKES:
          MESSAGE: M+05+NELS+NCN+SURVEILLANCE+TARGET+REPORTS+MSG+0HT
          MESSAGE: M+12+NELS+SLRVEILLANCE+TAPGFT+REPORTS+MSG+OHT.
     CUTPUT FPOM:
          ALPHA: A+20+NEI S+SURVETLLANCF+AND+TRACK+MSGS+ALPHA.
     THACED FROME
          ORIGINATING+REQUIPEMENT: ORIG+PEG+NELS+EXTERNAL+INTERFACF.
DATA: D+047+GROUND+TARGET+LENGTH+DATA.
     DATE+ENTERED: 11162.
     PESCRIPTION: "(IS ONLY) LINEAR EXTENT OF GROUND TARGET".
     FNTEDER+RY: "JJF-NELS".
     TYPE: PEAL.
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UNITS: METERS.
    USE: BOTH.
    MAKESI
          MESSAGE: M+05+NELS+NCN+SURVEILLANCE+TARGET+REPORTS+MSG+0"
          MESSAGE: M+12+NELS+SURVEILLANCE+TARGET+REPORTS+MSG+OHT.
    CUTPUT FROM:
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
    TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIGHREQ+NELS+EXTERNAL+INTERFACE.
DATA: D+048+GROUND+TARGET+LOC+X+DATA.
    PATE+ENTERED: 11182.
    DESCRIPTION: "X COORDINATE OF GROUND TARGET".
     ENTEDEN+RY: "JUF-NFLS".
     TYPE: PEAL.
    USE: BOTH.
    CONTAINED IN:
         FILE: F+07+GROUP+TARGET+LOCS+FILE.
     TRACEU FROME
          ORIGINATING+REQUIREMENT: UPIG+PEQ+NELS+EXIFRNAL+INTERFACE.
CATA: D+049+GROUND+TARGET+LOC+Y+DATA.
    PATE+ENTERED: 11182.
     DESCRIPTION: "Y CONROLNATE OF GROUND TARGET".
     ENTEREDORY: "JUF-NELS".
     TYPE: REAL.
    USE: BOTH.
     CONTAINED IN:
         FILE: F+07+GROUP+TARGET+LOCS+FILE.
     THACED FROM:
          ORIGINATING+REQUIPEMENT: OPIG+PEC+NELS+EYTERNAL+INTEPFACE.
DATA: 0+050+GROUND+TARGET+VELOCITY+DATA.
     DATE+ENTERED: 11162.
     PESCRIPTION: "[MTI OFLY] VELOCITY OF GROUND TARGET".
     FNTERED+RY: "JJF-NELS".
     TYPE: PEAL.
    UNITS: KPH.
    USF: BOTH.
     MAKESI
          MFSSAGE:
                   M+05+MELS+NON+SURVEILLANCE+TAPGET+REPORTS+MSG+OUT
          MESSAGE: Melzenelsesteveillandfetargetereportsemsgeout.
     CUTPUT FROM:
          ALPHA: A+20+NELS+SURVETLLANCE+AND+TRACK+MSRS+ALPHA.
     THACED FROM:
          OPIGINATING+REQUIFEMENT: OPIG+RED+NELS+EYTERNAL+INTERFACE.
DATA: DANS6+NEEDFD+FEASIRLE+DATA.
     DATE+ENTERED: 100581.
     DESCRIPTION: "INFORMATION CONCERNING A FEASIBLE TARGET".
     FHTEPED+RY: "D HAPTSCHUH".
     PANGE: "SOI, AOT, BOTH".
     TYPE: FNUMERATION.
     HSE: BOTH.
     MAKESI
          MFSSAGE:
                   M+OU+NELS+MODIFIED+TASK+MSG+IN
          MESSAGE:
                    M+OR+VELS+PFIORITIZED+SENSOP+DIPERTTOUS+MSG+IN.
     TYPUT TO:
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ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA:
          A+15+NELS+PROCESS+PRICRITIZED+SENSUP+DIRECTIONS+ALPHA.
     TRACED FROM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: D+058+NELS+DD+1+2+DATA.
     DATE+ENTERED: 11202.
     DESCRIPTION: .
     "DIFFERENTIAL DOPPLER RETWEEN NELS PLATFORMS 1 AND 2".
     FNTEREDORY: "JIF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: Dellenel SetDOA+DD+DATA.
     TRACED FROM:
          OPIGINATING+REGNIPEMENT: URIG+REG+NELS+TARGET+ACQUISITION.
DATA: DEOSOFHELSEDDE1+3+DATA.
     DATE+ENTERFU: 11282.
     PESCRIPTION:
     "OTFFERENTIAL POPPLER RETAFEN NELS PLATFORMS 1 AND 3".
     FNTERED+AY: "JIF-NFLS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: OF112+NELSETPO1+ND+DATA.
     TRACED FROM:
          ORIGINATING+REUDIREMENT: ORIGHPED+NELS+TARGET+ACOUTSTITON.
DATA: D+060+NELS+DP+2+3+DATA.
     DATE + ENTERED: 11282.
     DESCRIPTION:
     "DIFFERENTIAL COPPLER PETAFEN NELS PLATFORMS 2 AND 3".
     FNTERED+RY: "JIF-NELS".
     TYPE: REAL.
     USE: BOTH.
     INCLHOFU IN:
          DATA: POSTE SOND ACTION AND ATA.
     TRACED FRUH:
          ORIGINATING*PEQNIPEMENT: OPIG*PEC*NELS*TARGET*ACOUISTTIOM.
DATA: D+061+NELS+EMISSIUN+PURATION+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION:
             "TIME THAT EMITTER IS EMITTING AND BEING LISTENED TO
   PY NELS".
     FNTEREDORY: "JUF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+1U+NELS+CAMDIDATF+TARGETS+FILE.
     TRACED FRUM:
          URICINATING + REGULARENET T: OPIG+ GEO + NEL S+ 401.
DATA: D+062+MELS+EMISSIUM+SIGNAL+STRENGTH+DATA.
     DATE+ENTERFUL 11182.
     PESCRIPTION:
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*S/N STRENGTH OF SIGNAL FOR A SINGLE SENSUR: STRENGTH
 DATA FROM AT LEAST TWO SENSORS IS REQUIRED REFORE A LETECTION CAN
 BE CONFIRMED".
    ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
    USF: BOTH.
    CONTAINED IN:
         FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+PER+NELS+ANI.
DATA: D+063+A+NELS+EMISSTON+START+TIME+DATA.
    DATE+ENTERED: 30283.
     DESCRIPTION: " TIME FMISSION STARTS (INITIALIZED DATA)".
     FNTEREDORY: "JOHANS".
     TYPE: PEAL.
    UNITS: HRS+MIN+SEC.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+071+NEI S+EMITTER+DATA.
     TRACED FROM:
          ORIGINATING+REGHIREMENT: URIG+REG+SCFNARTU+TTMING.
DATA: D+053+R+NELS+EMISSION+START+TIME+DATA.
    PATE+ENTERED: 30283.
     DESCRIPTION: " TIME EMISSION STARTS (BEFORE SOI)".
     FNTERED+PY: "JOURS".
     TYPE: PEAL.
     UNITS: HRS+MIN+SEC.
     HISE: BOTH.
     INCLUDED IN:
          OATA:
                Penshener Stemittertactivity tround truthedata.
     THACED FROME
          ORIGINATING+REQUIPEMENT: OPIC+RES+SCENARIO+TIMING.
DATA: D+063+NELS+EMISSION+START+TIME+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "TIME EMISSION STARTS".
     ENTERED+RY: "JJF-ES".
     TYPE: REAL.
     UNITS: HRS+MIN+SFC.
     USE: BOTH.
     CONTAINED INT
          FILE: F+10+NELS+CAMDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIGHRES+SCENARIO+TIMING.
DATA: De064+4+NELS+EMISSTOM+STOP+TIME+DATA.
     DATE+ENTFRED: 30783.
     DESCRIPTION: "TIME EMISSION STOPS (INITIALIZED DATA)".
     FNTEREDORY: "JOURNS".
     TYPE: REAL.
     UNITS: HRS+MIN+SEC.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+071+NELS+EMITTER+DATA.
     TRACEU FROM:
          ORIGINATING+READIPEMENT: ORIG+REQ+SCENARTH+TTMING.
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DATA: D+064+NELS+EMISSIUH+STOP+TIME+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "TIME EMISSION STOPS (BEFORE SOT)".
     FNTERED+RY: "JJF-ES".
     TYPE: REAL.
     UNITS: HRS+MIN+SEC.
     USF: BOTH.
     INCLUDED IN:
          DATA: Denb6+NELS+EMITTER+ACTIVITY+GHOUND+TRUTH+DATA.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: URIG+REG+SCFNARIO+TIMING.
DATAL DEPOSENELS FEMISSIONETHE BYETABLE + DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION: MA RECORD DESCRIPTING A SINGLE EMITTERM.
     ENTERED+UY: "JJF-NELS".
     INCLUDES:
          UATA:
                 PANTANEL SAEMITTERATIME OF ALCCATIONADATA
                 DADBOANEL SAEMITTERATRAFFICATYPEADATA
          DATA:
                 9-171+HELS+EMITTER+ID+DATA
          DATA:
          DATA:
                 Del 72 enel Seemitteretransmissioneerfuue Novedata
          DATA:
                 De173+NEL SEEMITTER + X+DATA
                 D+174+NEL S+EMITTER+Y+CATA
          DATAL
          DATA:
                 De175+NELS+EMITTER+Z+DATA
          DATA:
                 DATALANEL SEEMITTERAMOUNLATIONATYPEADATA
          DATA:
                 Detapenel SeemITTFREHANDAIDTHEDATA
          DATAS
                 D+183+NEL S+EMITTER+CFP+DATA.
     CONTAINED IN:
          FTLF: F+13+NFLS+FMTSSINN+THREAT+TARLF+FTLE.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: OPIG+PEC+NELS+THREAT+TAPLE++PPATE
DATA: P+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION:
     TA STUGLE PECORD OF NELS SCHUARIO FIFL (REFORE SOI)T.
     ENTERED+PY: "JOURAS".
     INCLUDES:
          DATA: D+063+R+NELS+EMISSIUN+START+TIME+DATA
          DATA:
                PANGUANEL SAEMISSIONASTOPATIMEADATA
                D+073+9+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA
          DATA:
          DATA: P+075+P+NELS+EMITTER+ID+DATA
                - N+OB1+R+NELS+EMITTER+TRANSMISSIOM+FREQUENCY+NATA
          DATAS
          DATA: P+082+NELS+EMITTER+VFL+X+DATA
                PHOSSONEL SOEMITTEROVELOYODATA
          DATAS
          DATAL
                DONAHONEI SEEMITTEREVELEZEDATA
          UATAL
                 Denasemensemitterexedata
          DATAL
                 D+086+B+NELS+EMITTER+Y+BATA
                 De087+PANEL SEEMITTER-Z-DATA
          DATAL
          DATAS
                 De130+B+SCFNARIO+GEN+1D+NUM+DATA.
     CONTAINED THE
          FILE: F+14+NFLS+FMIITER+ACTIVITY+GROUNN+THUTH+FILE.
     TRACEU FROM:
          OPIGINATING*REGHIREMENT: OFIG*PER*NELS*EXTERNAL*INTERFACE.
DATA: D+067+NELS+EMITTER+HANDWILTH+DATA.
```

```
DATE+ENTERFD: 11182.
     DESCRIPTION: "BANDWINTH OF EMISSION(S) EMITTER EMITS".
     ENTEREPORY: "JJF-NFLS".
     TYPE: REAL.
    UNITS: HERTZ.
    USF: BOTH.
     INCLUDED IN:
          DATA: Denogenel Stemittertcharacteristics+DATA.
     TRACED FROM:
          OFIGINATING+REGUIPEMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE.
DATA: D+OGR+NELS+EMITTER+CEP+DATA.
     PATE+ENTERED: 11282.
     DESCRIPTIONS
             "CIRCULAR ERROR PHOBABLE ESTIMATE FOR A MELS
   DETECTABLE EMITTER".
     FNTERED+RY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: Denggenel SeestimatedeGPOUNDetrutHeDATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REG+NELS+THREAT+TARLF+UPDATE
DATA: D+069+NELS+EMITTER+CHAPACTERISTICS+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             "A SINGLE RECORD OF EMITTER+TO AND EMITTER
   CHARACTEPISTICS".
     ENTERED+BY: "JJF-NELS".
     INCLUDES:
          DATA: P+067+NELS+EMITTFR+BANDWIDTH+DATA
          DATA:
                 D+077+4+NELS+EMITTER+MODULATION+TYPE+DATA
          DATA: D+078+A+NELS+EMITTER+POWFR+LFVEL+DATA.
     CONTAINED INS
          FILE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REG+NELS+E IFHNAL+INTERFACE.
DATA: D+070+NELS+EMITTER+COV+DATA.
     PATE+ENTERED: 11282.
     DESCRIPTION: "COVARIANCE BETWEEN X AND Y LOCATION ESTIMATES".
     ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          OFIGINATING + REGISTREMENT:
          OPIG+RED+NELS+COARSE+AND+FINE+LOCATION.
DATA: D+071+NELS+EMITTER+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "PECORD OF MELS EMITTER FILE ( INITIALIZED)".
     ENTERED+BY: "JOURBS".
     INCLUDES:
          DATA: D+063+4+NELS+EMISSION+START+TIME+DATA
```

```
DATAL DEGGERALNELS-EMISSION-STOP-TIME-DATA
                 Den73+A+NELS+EMITTER+FREQUENCY+BANDHIDTH+DATA
          DATAS
                 9+075+A+NELS+EMITTER+ID+DATA
          DATAS
                 D+C81+A+NELS+EMITTER+TRANSMISSION+FREQUENCY+PATA
          DATA:
                 D+082+4+MELS+EMITTER+VEL+X+DATA
          DATAS
                 D+083+A+NELS+EMITTER+VEL+Y+DATA
          DATA:
                 Den84+A+NELS+EMITTER+VEL+Z+DATA
          DATA:
          DATA:
                 Den65+A+NELS+EMITTER+X+DATA
          DATA:
                 T+086+4+NELS+EMITTER+Y+DATA
                 D+087+A+NELS+EMITTER+Z+DATA
          DATA:
          DATA: D+130+A+SCENARIO+GEN+ID+NUM+DATA.
     CONTAINED INS
         FILE: F+16+NFLS+FMITTER+FILE.
     TRACED FOOM:
          OPIGINATING + REQUIREMENT: UPIG+RED+SCENARIO+TIMING.
DATA: N+072+HELS+EMITTER+DYNAMICS+DATA.
     DATE+ENTERED: 1027F1,
     rescription: "30 velocity vector of fmitter".
     ENTEREDORY: "JJF-ES".
     INCLUDES:
                 Den82+NELS+EMITTER+VEL+X+DATA
          DATA:
          DATA: P+083+NELS+EMITTER+VEL+Y+DATA
          DATA: D+084+NELS+EMITTER+VEL+Z+DATA.
     TRACEU FROM:
          OPIGINATING+REUNIREMENT: OPIG+PER+PHODUCF+SCENARIO.
DATA: DAN73+AANELS+EMITTFR+FREGUENCY+BANDWIDTH+DATA.
     DATE+ENTERFO: 30283.
     DESCRIPTION:
     "BANDWIDTH OF MARROWRAND EMISSION (INITIALIZED DATA)".
     ENTEREDORY: "JOURBS".
     TYPE: DEAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: DAMTIANEL SAEMITTERADATA.
     TRACED FROM:
          UPIGINATING+REGHIPEMENT: ORIGHREGEPRODUCE+SCENARIO.
DATA: DANTRARENELSEMITTERAFREGUENCYABANDAIDTHADATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "RANUWINTH OF NARROWBAND EMISSION (REFORE SOI)".
     ENTERENARY: "JOURHS".
     TYPE: PEAL.
     UNITS: HERTZ.
     ISF: BOTH.
     THELUDED IN:
                 DAMAGAMEL SAEMITTER ACTIVITY SROUND ATPUTHADATA.
          DATA:
     TRACED FORM:
          GRIGINATING+REGHIPEMENT: OPIG+REG+PHODHCE+SCENARIO.
DATA: DARTHALLS+EMITTER+FPERUFNCY+BANDWIDTH+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "PANDAINTH OF NAPPOWBAND EMISSION".
     FNTEDED+RY: "JJF-ES".
     TYPE: PEAL.
     HATTS: HERTZ.
```

```
USF: BOTH.
    CONTAINED IN:
         FILE: F+10+NFLS+CANDIDATE+TARGETS+FILE.
    TRACED FROM:
         ORIGINATING + REQUIREMENT: ORIG + REQ + PRODUCE + SCENARIO.
DATA: D+075+A+NELS+EMITTER+ID+DATA.
    DATE+ENTERED: 30283.
    DESCRIPTION: "IDENTIFIER OF EMITTER (IMITIALTZED DATA)".
    FNTERED+3Y: "JOURBS".
    RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUP, MISSTLE, UNKNOWIF.
     TYPE: ENUMERATION.
    HSF: BOTH.
     INCLUDED IN:
         DATA: DEOTIENEL SEEMITTEREDATA.
     TRACEU FRUTT:
          ORIGINATINGEREUNIPEMENT: ORIGEREUEPRODUCEESCENARTO.
DATA: DADISHUANELSAEMITTERAIDADATA.
    MATE + EMTEKEU: 30283.
    DESCRIPTION: "TOENTIFIER OF EMITTER (HEFORE SUT)".
    ENTEPED+PY: "JOURUS".
    PANGE: "PADIO, TANK, IPUCK, PLANE, SHIP, SUR, MISSTLE, UNKNOWNE,
    TYPE: FNIMERATION.
    USF: BOTH.
    ORDERS:
         FILE: Fe14+NFLS+FMITTED+ACTIVITY+GPOUND+TRUTH+FILE.
     INCLUDED IN:
         UATAL DEPOSE PLE SEEMITTERFACTIVITY FOR OUNDETPUTHED ATA.
     TRACED FROM:
         URIGINATING+REGHIREMENT: URIG+PEG+PHOUMCE+SCFNARIO.
DATA: DEN75+MELS+EMITTER+ID+DATA.
    PATE+ENTERED: 102791.
    DESCRIPTION: "TUPNTIFICATION OF FMITTER".
     ENTERED+RY: "JJF-ES".
    PANGE: "RACIO, TANK, TOUCK, PLAME, SHIP, SUP, MISSILF, UNKNOWN".
     TYPE: FNUMFRATION.
    USE: BOTH.
    CONTAINED INT
         FILE: F+10+NFLS+CANDIDATE+TARGETS+FILE.
     TRACED FRUM:
          DATA: NOOTHONELSTEMITTERALOCATIONODATA.
    PATERENTERED: 102791.
     DESCRIPTION: "PUSITION OF TELS-DETECTABLE EMITTER".
     FNTEPEP+PY: "JJF-ES".
     INCLUDES:
          UATA:
                PORSONEL SHEMITTER + X+DATA
          DATAL DEPARENCES TIEREYEDATA
          DATAL DECATABLE SEEMITTER-Z-DATA.
    CONTAINED THE
         FILE: F+10+NFLS+CANDICATE+TARGETS+FILE.
     TRACED FRUM:
          UNIGINATING + RESULFEMENT: UPIG+PER+ROUGF+SCENARTO.
DATAL - NOO77+A-MELS-EMITTER-MODULATION-TYPE-DATA.
```

```
DATE+ENTERED: 30783.
    DESCRIPTIONS
     HTYPE OF MODULATION EXHIBITED BY EMITTER (REFORE SOI)".
    ENTERED+PY: "JOURNS".
    PANGE: "MODULATED, NOT+MODULATED".
     TYPE: FNUMERATION.
    USE: BOTH.
     INCLUDED IN:
          DATA: D+069+NELS+EMITTER+CHARACTERISTICS+DATA.
     THACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+077+NELS+EMITTER+MODULATION+TYPE+DATA.
     DATE+ENTERED: 11187.
     DESCRIPTION: "TYPE OF MODULATION EXHIBITED BY FMITTER".
     FNTERED+8Y: "JJF-NELS".
     RANGE: "MODULATED, NOT+MODULATED".
     TYPE: FNUMERATION.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+088+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA.
     TRACED FROM:
          ORIGINATING + REQUIREMENT: CRIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+078+A+MELS+EMITTFR+POHER+LFVFL+DATA.
     DATE+ENTERED: 30763.
     DESCRIPTION: "POWER LEVEL OF EMITTER (REFORE SOI)".
     ENTEREDERY: "JOURGS".
     TYPE: REAL.
     UNITS: MATTS.
     USF: BOTH,
     INCLUDED IN:
          DATA: 0+069+MELS+EMITTER+CHARACTERTSTICS+DATA.
     TRACED FROM:
          UPIGINATING+REQUIPEMENT: UPIG+REG+NELS+EXTERNAL+INTEPFACE.
DATA: DAMTRANELS+EMITTERAPOAFRALFVEL+DATA.
     DATE - ENTERED: 11187.
     DESCRIPTION: "POWER LEVEL OF EMITTER".
     ENTEREDORY: "JJF-NFLS".
     TYPE: PEAL.
     UNITS: WATTS.
     HSF: BOTH.
     INCLUDED IN:
          DATA: DEOURENEL SEESTIMATEDEEMITTEREPARAMETERSEDATA.
     TRACED FROM:
          OPIGINATING+HEUNIPEMENT: ORIG+PER+NELS+EYTFRMAL+INTEPFACF.
DATA: POOT9+NELS+EMITTER+TIME+CF+( OCATIUM+DATA.
     DATE + ENTERED: 11282.
     DESCRIPTION: "TIME AT WHICH THE EMITTER WAS LUCATED".
     FNTERED+RY: "JJF-NFLS".
     TYPE: PEAL.
     USF : BOTH.
     PRPERS:
          FILE: FOISONFLEOFMISSIONOTHREATOTAPLFOFILE.
      INCLINED IN:
           DATA: DECESTED SET ISSTONETHREATETAN E-DATA.
```

TRACED FROM: ORIGINATING+REQUIREMENT: OPIG+PEQ+NELS+THREAT+TAPLF+HPDATE DATA: D+080+NELS+EMITTER+TRAFFIC+TYPE+DATA. DATE+ENTERED: 11282. DESCRIPTION: "TRAFFIC TYPE CODE FOR A NELS EMITTER". FNTEPED+RY: "JJF-NELS". RANGE: "PASSIVE, POTENTIAL + THREAT, THREAT". TYPE: FNUMERATION. USE: BOTH. INCLUDED IN: DATA: D+065+NELS+EMISSIUN+THREAT+TABLE+DATA. TRACED FRUM: ORIGINATING+REGUIREMENT: URIG+REG+NELS+THFFAT+TABLF+HFDATE DATA: DAGBIEACHELSEEMITTERCTRANSMISSIONEFREQUENCYCDATA DATE+ENTERED: 30283. DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (INITIALIZED DATA)". FNTEPED+BY: "JOUPUS". TYPE: REAL. UNITS: HERTZ. USE: BOTH. INCLUDED IN: DATA: D+071+NELS+EMITTEH+DATA. TRACED FROM: ORIGINATING+REGHIREMENT: ORIG+REG+PHODHCF+SCENARTO. DATA: De081+ReNELS+EMITTER+TRANSMISSION+FREUDEMCY+DATA. DATE+ENTERED: 30283. DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (MERGRE SOI)". FNTEPED+RY: "JOURBS". TYPE: PEAL. UNITS: HERTZ. USF: BOTH. INCLUDED IN: DATA: D+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA. TRACED FROM: ORIGINATING+REQUIREMENT: OPIC+REQ+PHODUCF+SCENARIO. DATA: D+081+NELS+EMITTER+TRANS*ISSTON+FREQUENCY+DATA. DATE+ENTFRED: 102781. DESCRIPTION: "TRANSMISSION ERROUFINGY OF EMITTER". ENTEREDORY: "JJF-ES". TYPE: REAL. UNITS: HERTZ. USF: BOTH. CONTAINED IN: FILE: F+10+NELS+CANDIDATE+TAPGFTS+FILE. TRACED FROM: ORIGINATING*REQUIREMENT: URIC+PED+PRODUCF+SCENARTO. DATA: D+082+A+NELS+EMITTER+VFL+X+DATA. CATE+ENTERED: 20283. **DESCRIPTION:** MEAST/WEST COMPONENT OF VELOCITY (INITIALIZED DATA) ".

```
FNTERED+RY: "JOUPSS".
     TYPE: PEAL.
     UNITS: KPH.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+EMITTER+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: UPIG+RED+PRODUCF+SCENARIO.
DATA: D+082+NELS+EMITTFR+VEL+X+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "FAST/WEST COMPONENT OF VELOCITY (BEFORE SOI)".
     ENTERED+BY: "JJF-ES".
     TYPE: PEAL.
     UNITS: KPH.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+C66+NELS+EMITTER+ACTIVITY+GROUND+TPUTH+DATA
          DATA: D+072+NELS+EMITTER+DYNAMICS+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: OPIG+REQ+PRODUCE+9CENARIO.
DATA: D+083+A+NELS+EMITTER+VFL+Y+DATA.
     DATE+ENTERED: 20283.
     DESCRIPTION:
     "NORTH/SOUTH COMPONENT OF VELOCITY (INITIALIZED DATA)".
     FNTEPED+RY: "JDUBUS".
     TYPE: PEAL.
     UNITS: KPH.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+EMITTER+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REG+PRODUCF+SCENARIO.
DATA: D+083+NELS+EMITTER+VFL+Y+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "MORTH/SOUTH COMPONENT OF VELOCITY (BEFORE SOI)".
     FNTERED+RY: "JJF-ES".
     TYPE: REAL.
     UNITS: KPH.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+066+NELS+EMITTFR+ACTTVITY+GROUND+TPUTH+DATA
          DATA: D+072+NELS+EMITTEH+DYNAMICS+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REG+PRODUCE+SCENARIO.
DATA: D+084+A+MELS+EMITTFR+VEL+Z+DATA.
     DATE+ENTERED: 20283.
     DESCRIPTION: "PP/DOWN COMPONENT OF VELOCITY (INITIALIZED DATA)".
     ENTEREC+RY: "JOURS".
     TYPE: PEAL.
     UNITS: KPH.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+071+NEL S+EMITTER+DATA.
     TRACED FROM!
```

OPIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.

```
DATA: D+084+NELS+EMITTER+VFL+Z+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "UP/DOWN COMPONENT OF VELOCITY (BEFORE SOI)".
     ENTEPED+BY: "JJF-ES".
     TYPE: REAL.
     HNTTS: MPS.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+066+NELS+EMITTFR+ACTIVITY+GROUND+TRUTH+DATA
          DATA: D+072+NELS+EMITTER+DYNAMICS+DATA.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+085+A+NELS+EMITTER+X+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "PISTANCE EAST/WEST (INITIALIZED DATA)".
     ENTEPED+RY: "JOURBS".
     TYPE: FEAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+EMITTFH+DATA.
     TRACED FROM:
          OPIGINATING+REGNIPEMENT: OPIG+PEG+PRODUCF+SCENARIO.
DATA: P+085+B+NELS+EMITTER+X+DATA.
     PATE+ENTERED: 30283.
     DESCRIPTION: "DISTANCE EAST/WEST (REFORE SOI)".
     ENTERENHAY: "JOURBS".
     TYPE: FEAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: P+066+NELS+EMITTER+ACTIVITY+GROUND+TPUTH+DATA.
     TRACED FROM:
          ORIGINATING*REQUIREMENT: ORIG*PEQ*PROPUCE*SCENARTO.
DATA: D+085+NELS+EMITTER+X+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "DISTANCE EAST/WEST".
     FNTERED+RY: "JJF-ES".
     TYPE: BEAL.
     HNTTS: KM.
     USE: BOTH.
     THOLUDED IN:
          DATA: D+075+NELS+EMITTER+LOCATION+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REC+PRODUCE+SCENARIO.
PATAL DECISEALVELSEMITTEREYEDATA.
     DATE+ENTERFU: 30283.
     rescription: "ristance worth/south (INITIALIZED DATA)".
     FNTEREPOPY: "JDURHS"
     TYPE: DEAL.
     PATTS: KM.
     HSF: BOTH.
```

```
INCLUDED IN:
          DATA: D+071+4ELS+EMITTFR+DATA.
     TRACED FROM:
          DRIGINATING+REQUIREMENT: OFIG+REQ+PRODUCF+SCENARIO.
DATA: D+086+R+NELS+EMITTFR+Y+DATA.
     PATE+ENTERFD: 30283.
     DESCRIPTION: "DISTANCE NORTH/SOUTH (REFORE SOI)".
     ENTEPEN+RY: "JOURBS".
     TYPE: REAL.
     UNITS: KM.
     USF: HOTH.
     INCLUDED IN:
          DATA: 0+066+NEI S+EMITTER+ACTIVITY+GROUND+TRUTH+DATA.
     TRACED FRUM:
          URIGINATING+REUHIREMENT: ORIG+RED+PRODUCE+SCENARIO.
DATA: DANGHAMELSHEMITTERAYADATA.
     MATE + ENTERED : 102781.
     DESCRIPTION: "DISTANCE NORTH/SOUTH".
     FNTEREDORY: "JJF-ES".
     TYPE: REAL.
     INTIS: KM.
     HSF: BOTH.
     INCLHOFO IN:
          DATA: DANTA-NELS-EMITTER-LOCATION-DATA.
     TRACEU FROM:
          URIGINATING + REQUIREMENT: OPIG+REG+PRODUCE+SCENARTO.
DATA: DAMATHAMES SHEMITTER+Z+DATA.
     PATE+ENTERED: 30283.
     DESCRIPTION: "ALTITUDE/ELEVATION (INTITALIZED DATA)".
     FNTEREDORY: "JOURNS".
     TYPE: REAL.
     UNITS: METERS.
     HSF: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+EMITTFH+DATA.
     TRACEU FROM:
          OPIGINATING*REGHTPEMENT: ORIG#REG#PROUNCF#SCENARTO.
DATA: DenoteRenEl SeEMITTEReZeDATA.
     DATE+ENTERED: 30283.
     DESCRIPTION: "ALTITUDE/ELEVATION (SEFORE SOI)".
     FNTERET+RY: "JOURHS".
     TYPE: PEAL.
     HNITS: METERS.
     USF: BOTH.
     INCLINDED IN:
          DATA: PANGGAMEL SAEMITTERFACTIVITY GROUND ATPUTHOUATA.
     TRACED FROM:
          OFIGINATING*REQUIREMENT: ORIG#REG#PRODUCF#SLENARTO.
DATA: D+OB7+NELS+EMITTFR+Z+DATA.
     DATE+ENTERFD: 102791.
     DESCRIPTION: "ALTITUDE/ELEVATION".
     ENTERENARY: "JJF-ES".
```

TYPE: PFAL.

```
UNITS: METERS.
    USE: HOTH.
     INCLUDED IN:
          DATA: D+076+NELS+EMITTER+LOCATION+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+PRODUCF+SCENARIO.
DATA: D+088+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA.
    DATE+ENTERED: 11282.
    DESCRIPTION: "PARAMETERS ESTIMATED BY TARGET ACQUISITION".
    ENTERED+BY: "JJF-NFLS".
     INCLUDES:
                 D+077+NELS+EMITTER+MODULATION+TYPE+DATA
          DATAL
                 PHO79+NELS+EMITTER+POWER+LEVEL+DATA
          DATA:
                 D+159+NELS+EMITTER+FPERUENCY+HANDWIDTH+DATA
          DATAL
                D+161+NELS+EMITTER+TPAMSMISSION+FREWUENCY+DATA.
          DATAS
    CONTAINED IN
          FILE: F+17+NELS+FSTIMATED+FMITTER+PARAMETERS+FILE.
     TRACED FROM:
          URIGINATING+REQUIPEMENT: ORIG+REQ+NELS+TARGET+ACOUTSTITON.
DATA: D+089+NELS+ESTIMATED+GPOUND+TRUTH+DATA.
    DATE+ENTFRED: 11282.
    PESCRIPTION:
             MA RECORD OF ESTIMATED GROUND LUCATIONS FOR ONE
   EMITTEP".
     FNTERED+RY: "J.IF-NELS".
     INCLUDESE
                 Denogenel Seemitter+CEP+DATA
          DATA:
                 D+157+MELS+EMISSION+DUPATION+DATA
          DATA:
          DATA:
                 T+158+NELS+EMISSION+START+TIME+UATA
          DATA:
                 D+160+NELS+EPITTEH+ID+DATA
          DATAI
                 De162+NEL SEEMITTEREXEDATA
          UATA:
                 D+163+NEI S+EMITTER+Y+DATA
          DATAS
                 D+164+NELS+EMITTF#+Z+DATA
          DATA: 0+165+SCFMARTO+GEN+ID+NUM+DATA.
     CONTAINED INT
          FILE: F+18+NFLS+FSTIMATEN+GROUND+TRUTH+FILE.
     TRACED FROM:
          URIGINATING + REQUIREMENT: UPIG + RED + NELS + TARGET + ACOUISITION.
DATAL DEGGOENELS+FREQUENCY+SCAN+RANU+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "A RANGE OF FREQUENCIES TO SCAN".
     FNTEREDORY: "JJF-NFLS".
     INCLUDES:
          DATA: D+092+NELS+FREC+9CAN+LOWER+FREQ+DATA
          DATA: DEGREENELSEFFERESCANEUPPEREFFERENATA.
     CONTAINED INS
          FILE: F+19+NELS+FRENUENCY+SCAN+FILE.
     TRACED FRUM:
          URIGINATING+HEQUIPEMENT: OPIG+PEQ+NELS+SIGNAL+OF+INTEREST.
DATA: P+091+NELS+FREQUENCY+SCAN+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
     "FREQUENCY TO WHICH THE MELS SENSURS ARE TO BE THINED".
     FNTEREDORY: "JUF-NELS".
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TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     INPUT TO:
                  A+OR+NELS+FREQUENCY+SCAN+OPTIMIZATION+ALPHA
          AL PHA:
          ALPHA:
                  A+17+NEL S+SENSOP+STATUS+ALPHA
          AL PHA:
                  A+18+NELS+SIGNAL+OF+INTFREST+FILTFR+ALPHA.
     NUTPUT FROM:
          ALPHA:
                  A+OR+NELS+FRECUENCY+SCAM+OPTIMIZATION+ALPHA
          ALPHA:
                  A+17+NELS+SENSUR+STATUS+ALPHA.
     TRACEU FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+NELS+SFN9OR+DIRECTOR.
DATA: D+092+NELS+FPER+SCAN+LPHER+FRER+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "LOWER FREQUENCY OF A SINGLE FREQUENCY BAND".
     ENTERED+BY: "JJF-NFLS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: HOTH.
     INCLUDED IN:
          DATA: D+090+NELS+FPEGUENCY+SCAN+PAND+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+NELS+STGNAL+OF+INTEREST.
DATA: De093+NELS+FPED+SCAN+UPPER+FRED+DATA.
     DATE+ENTERFU: 11182.
     DESCRIPTION: "UPPER FREQUENCY OF A SINGLE FREQUENCY BAND".
     FNTERED+RY: "JJF-NFLS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+09C+NELS+FREGUENCY+SCAN+PANU+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNAL+OF+INTEREST.
DATA: D+094+NELS+PRE+BRIFFED+ACI+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "NELS FILTERING CRITERIA FOR FACH SEARCH AREA".
     ENTEREDORY: "JJF-NELS".
     INCLUDES:
                D+095+NELS+PRE+BRIEFED+A0I+FILTERING+CRITERIA+DATA
          DATAS
          DATAL
                 PARRENEL SAPREABRIEFED + ARIALINER + LFFT + PATA
          DATA: Denggenel SeppeebriffeDeanieuppfrentbuttedata.
     CONTAINED IN:
          FILE: F+20+NELS+PRF+BRIEFED+AOI+FILE.
     TRACED FROM:
          URIGINATING REQUIPEMENT: URIGERED NELS ADI.
DATA: D+095+NELS+PPE+BRIFFED+ACI+FILTERING+CRITERIA+NATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             "FILTERING CRITERIA FOR A SPECIFIC GEOGRAPHIC
   SEARCH AREA".
     ENTERED+RY: "JJF-NFLS".
     RANGE: "WITHINGAREA, WITHOUTGAREA".
     TYPE: ENUMERATION.
```

```
USE: BOTH.
    INCLUDED IN:
          DATA: DANGUANLI SAPREABRIEFEDANIADIATA.
     TRACED FROM:
          ORIGINATING+REWHIREMENT: ORIG+REC+MELS+ADI.
DATA: D+096+NELS+PPE+BRIFFED+ACI+LOWFR+LEFT+DATA.
    DATE+ENTERED: 11182.
     DESCRIPTION:
     "LOWER LEFT COORDINATES OF A GEOGRAPHIC SEARCH AREA".
     FNTERED+BY: "JJF-NFLS".
     INCLUDES:
                 De097+NELS+PRE+BRIEFED+ADI+LOWER+LFFT+X+DATA
          DATA:
          DATA: Dengaene SeppeebrifffDeanielowerelefteyedata.
     INCLUDED IN:
          DATA: D+094+NELS+PPE+BRIEFFD+A0I+DATA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.
DATA: D+097+NELS+PRE+BRIFFFD+ACI+LOWER+LEFT+X+DATA.
     PATE+ENTERED: 11182.
     DESCRIPTION:
             "X COORDINATE OF LOWER LEFT CORNER OF A REOGRAPHIC
   SEARCH APEAM.
     ENTERED+RY: "JJF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+096+NELS+PRE+BRIEFED+A01+LOWER+LEFT+DATA.
     TRACED FRUM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+ADI.
DATA: D+098+NELS+PRE+BRIFFED+ACI+LOWER+LEFT+Y+NATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             TY COORDINATE OF LOWER LEFT CORNER OF A GEOGRAPHIC
   SEARCH APEA".
     ENTERED+RY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+096+NELS+PRE+BRIEFED+ADI+LOWER+LEFT+DATA.
     TRACED FROM:
          ORIGINATING+REUHIPEMENT: ORIG+REQ+NELS+ANI.
DATA: D+099+NELS+PRE+BRIFFFD+ACI+UPPER+RIGHT+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION:
             "COORDINATES OF UPPER RIGHT CORNER OF A GEOGRAPHICAL
   SEARCH AREA".
     ENTERED+9Y: "JJF-NEL9".
     INCLUDES:
                D+100+NELS+PRE+BRIEFFD+A0I+UPPER+RIGHT+X+DATA
          DATA:
                D+101+NELS+PRE+BRIEFED+ADI+UPPER+RIGHT+Y+DATA.
          DATAS
     INCLUDED IN:
          DATA: D+094+NELS+PPE+BRIEFED+ADI+DATA.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: OPIG+REQ+NELS+AOI.
```

```
DATA: D+100+NELS+PPE+BRIFFFD+ACI+UPPER+RIGHT+X+DATA.
    DATE+ENTERED: 11182.
    DESCRIPTION:
             "X COORDINATE OF UPPER RIGHT CORNER OF A GEOGRAPHIC
   SEARCH APEA".
    ENTEREDORY: "JJF-NELS".
     TYPE: REAL.
    USF: BOTH.
     INCLUDED IN:
         DATA: P+099+NELS+PRE+BRIEFFD+ADI+UPPFR+RIGHT+DATA.
     TRACEU FROM:
          OPIGINATING+REQUIREMENT: OPIG+PEQ+NELS+ANI.
DATA: D+101+NELS+PPE+BRIFFED+ACI+UPPER+RIGHT+Y+DATA.
    DATE+ENTERED: 11182.
     DESCRIPTION:
             "X COORDINATE OF UPPER RIGHT CORNER OF A GEUGRAPHIC
   SEARCH AREA".
    ENTEPEPHAY: "JJF-NELA".
     TYPE: PEAL.
     HSF: BOTH.
     INCLUDED IN:
          DATA: DenggenerSepre-HRIEFFD-ANI+UPPFR+RIGHT+DATA.
     TRACED FROM:
          OPIGINATI GAREGHIREMENT: OPIGAREDANELSAADI.
DATA: D+102+NELS+PPE+BRIFFED+SCI+DATA.
    PATE+ENTERED: 11182.
     DESCRIPTION: "A RECORD OF FREQUENCY PANGES OF INTEREST".
     ENTEREDORY: "JJF-NELS".
     INCLUDES:
          DATA: D+103+NELS+PRE+BRIEFFD+SOI+END+FREO+DATA
          DATA: D+104+NELS+PPE+BPIFFED+SOI+FRED+DATA
          DATA: D+105+NELS+PRE+RPIEFFD+SDI+MODILATION+TYPE+DATA
          DATA: D+106+MELS+PRE+BRIFFFD+SOI+START+FRER+DATA.
     PONTAINED IN:
         FILE: F+21+NELS+PRE+PRIEFED+SUI+FILE.
     THACED FROM:
          OPIGINATING+REQUIPEMENT: OPIG+REQ+NELS+SIGNAL+OF+INTEREST.
DATA: P+103+NELS+PRE+BRIFFFD+SCI+END+FREQ+DATA.
     PATE+ENTERFD: 11182.
     DESCRIPTION: "FND FREGUENCY OF A FREQUENCY BAND".
     FNTEPEN+RY: "JJF-NFLS".
     TYPE: PEAL.
     UNITS: HERTZ.
     HSF: BOTH.
     INCLUDED IN:
         DATA: P+102+NELS+PPE+RPIFFFD+SOI+DATA.
     THACED FROM:
          OPIGIMATING+REUHIREMENT: ORIG+PEG+NELS+SIGNAL+OF+INTEREST.
DATA: D+104+NELS+PPE+BRIFFFD+SCI+FRED+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "PRIMARY EMISSION FREQUENCY TO TUNE TO".
     ENTERED+BY: "JJF+NELS".
     TYPE: REAL.
```

```
UNITS: HERTZ.
    USE: BOTH.
     INCLUDED IN:
          DATA: De102+NELS+PRE+BRIFFF0+S01+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+SIGNAL+OF+INTEREST.
DATA: ne105+NELS+PRE+BRIFFFD+SCI+MODULATTON+TYPE+DATA.
     DATE + ENTERED: 11182.
     DESCRIPTION: "MODULATION TYPE TO SEARCH FOR".
     ENTERED+RY: "JJF-NELS".
     RANGE: "MODULATED, NOT+MODULATED".
     TYPE: FNUMERATION.
     USF: BOTH.
     INCLUDED IN:
          DATA: P+102+NELS+PRE+BRIFFEU+SOI+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+REQ+NELS+SIGNAL+OF+INTFRFST.
DATA: DelOheNELSEPRESBRIFFFOESCIESTARTEREGEDATA.
     DATE+ENTEREDI 11182.
     DESCRIPTION: "START FREQUENCY OF A FREQUENCY BAND".
     ENTERED+RY: "JJF-NFLS".
     TYPE: PEAL.
     UNITS: HERTZ.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+102+NELS+PRE+BRIEFED+SOI+DATA.
     TRACED FROM:
          ORIGINATING **REQUIREMENT: ORIG **PEC***NELS**SIGNAL **OF **INTERFST.
DATA: D+109+NELS+TOUA+1+2+DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION: "TODA BETWEEN NELS PLATFORMS 1 AND 2".
     ENTERED+RY: "JJF-NFLS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: P+112+NELS+TDOA+DO+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REC+NELS+TARGET+ACGUISTION.
DATAL DATIONHELSTODALIATA.
     DATE+ENTERFO: 11282.
     DESCRIPTION: "TODA BETWEEN NELS PLATFORMS 1 AND 3".
     FNTERED+RY: "JJF-NELS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATA: "+112+NELS+TOU4+DD+DATA.
     TRACED FROME
          OPIGINATING+REQUIREMENT: ORIGHREQ+NELS+TARGET+4CQUISTTION.
DATAL DOLLISHTDUA-2-3-DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION: "TODA BETWEEN NELS PLATFORMS 2 AND 3".
     FNTERED+HY: "JJF-NFLS".
     TYPE: REAL.
```

```
USE: BOTH.
     INCLUDED IN:
          DATA: D+112+NELS+TDOA+DD+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQHNELS+TARGET+ACQUISTTION.
DATA: D+112+NELS+TDOA+DU+DATA.
     DATE+ENTERED: 11282.
     DESCRIPTION:
             "A RECORD OF TOUA AND DO HEASUREMENTS FUR A PARTICULAR
  FMISSION".
     FNTERED+RY: "JJF-NFLS".
     INCLUDES:
          DATA: D+05A+NELS+D0+1+2+DATA
          DATA: D+059+NELS+DD+1+3+DATA
          DATA: D+000+NEL S+DD+2+3+PATA
                D+109+NELS+TDDA+1+2+DATA
          DATAL
          DATAL DOLLOWEL SETDOACTA
          DATA: D+111+NELS+TDQA+2+3+DATA.
     CONTAINED IN:
          FILE: F+24+NFLS+TONA+DN+FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REG+NELS+TARGET+ACGUTSITION.
DATAL DELISTYPEDEEMITTEREREPORTEDATA.
     DATE+ENTERED: 11282.
     DESCRIPTION:
             "CONTENTS OF A TYPED EMITTER REPORT OUTPUT BY
   THE SIGNATURE ANALYSTS ALPHAM.
     ENTEREPHRY: "JJF-NELS".
     INCLUDES:
         DATA: P+070+NELS+EMITTER+COV+DATA
          DATA: DAGGARNEL SEEMITTERFEREDUENCY FOATA
         DATA: D+166+NELS+EMITTER+ID+DATA
         DATAS
                D+167+NELS+EMITTER+X+DATA
         DATA:
                N+168+NELS+EMITTER+Y+DATA
         DATAL
                D+169+NELS+EMITTEH+Z+UATA
         DATAL
                D+170+SCENARIO+GEN+ID+NUM+DATA
         DATA:
                P+176+MELS+EMITTER+BANDWIDTH+DATA
         DATAL
                "+177+NEL SEEMITTER+CEP+DATA
         DATA:
                MATTRAMET SAEMITTERAMODULATIONATYPEADATA
         DATAS
                D+179+MEI S+EMITTER+TIME+OF+LOCATION+DATA
         DATA: De180+NELS+EMITTER+TRAFFIC+TYPF+DATA.
     CUNTAINED IN:
          FILE: F+25+NFLS+TYPED+FNITTER+PEPURT+FILE.
     TRACED FROM:
          OPIGINATING+REGHIREMENT: OPIG+REC+NELS+STGMATURE+AMALYSIS.
DATA: D+114+PLATFORM+LOCATION+x+DATA.
     DATE+ENTERFD: 11187.
     DESCRIPTION: "Y COORDINATE OF A PLATFORM".
     ENTEREDORY: "JJF-NFLS".
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+33+SFNSOR+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          UPISIMATINGEREQUIPEMENT: ORIGEREDEMENSEE YTERMALEINTEMENCE.
```

```
DATA: D+115+PLATFOPM+LOCATION+Y+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "Y COURDINATE OF A PLATFURM".
     ENTERED+BY: "JJF-NELS".
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+33+SENSOR+PLATFOPM+LOCATION+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+116+PLATFORM+LOCATION+Z+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "7 COORDINATE OF A PLATFORM".
     ENTERED+BY: "JJF-NFLS".
     TYPE: FEAL.
     HSF: BOTH.
     CONTAINED INT
          FILE: F+33+SENSOR+PLATFORM+LOCATION+FILE.
     TRACED FROM:
          URIGINATING+REQUIREMENT: URIG+REQ+NELS+EXTERNAL+INTERFACE.
DATAL DESITED ATFORMEMODE XEDATA.
     DATE+ENTERED: 11182.
     RESCRIPTION: "DESIRED X COCRDINATE FOR SENSO" POSITION".
     FNTERED+BY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+32+SENSOR+ORPIT+MODS+FILE.
     TRACED FROM:
          ORIGINATING+REQHIREMENT: ORIGHREGHNELS+EXTERNAL+INTERFACE
          OPIGINATING+REQUIPEMENT: OPIG+PEQ+SENSOR+ACTIVITY+FLFMENTS
DATA: D+118+PLATFOPH+MOD+Y+DATA.
     DATE+ENTERED: 11182.
     DESCRIPTION: "PESIRED Y CORPOINATE FOR SENSOR POSITION".
     ENTEREDORY: "JUF-NELS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+32+SENSUR+CRRIT+MODS+FILE.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: URIG+REG+NELS+EXTERNAL+INTERFACE
          OPIGINATING+REGHIPEMENT: UPIG+PED+SENSOR+ACTTVITY+ELFMFNTS
DATA: P+119+PLATFURM+MOD+Z+DATA.
     DATE+ENTERFOI 11182.
     DESCRIPTION: "DESIPED Z COORDINATE FOR SENSOR PSOITION".
     FNTERED+RY: "JJF-NELS".
     TYPE: REAL.
     USE: BOTH.
     CONTAINED IN
          FILF: F+32+SENSOR+ORBIT+MODS+FILE.
     TRACED FRO41
```

part.

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ORIGINATING+REGHIPEMENT: ORIG+REG+NELS+EXTERNAL+INTERFACE
OPIGINATING+REGHIPEMENT: OPIG+PEG+SENSOR+ACTIVITY+ELEMENTS

DATA: P+120+PRFCIPITATION+DATA. DATE + ENTEREU: 11162. DESCRIPTION: "PRECTPITATION DATA". FNTEREDORY: "JJF-NELS". PANGE: "NONE DPIZZLE, RAIN, SNOW, SLEFT, HAIL, RIME". TYPE: FNUMERATION. USF: BOTH. INCLUDED IN: DATA: D+038+CONDITIONS+AT+ELFVATION+WEATHER+DATA. TRACED FROM: ORIGINATING **REQUIREMENT: ORIGEREGENELS**STGNAL**TO**NOISE. DATA: D+125+PER+DESTINATION+SENSOR+ID+DATA. DATE+ENTERED: 92481. DESCRIPTION: "IDENTIFICATION OF REQUESTED DESTINATION SENSOR". ENTERED+BY: "D HARTSCHUH". PANGE: "GPS+NELS+1, GPS+NELS+2, GPS+NELS+3". TYPE: ENUMERATION. USF: BOTH. MAKES: MESSAGE: M+10+NELS+SENSOR+REQUESTS+MSG+QUT. CUTPUT FROM: ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA. TRACED FROM: DECISION: CONTENTS+OF+MESSAGE. DATA: D+126+REQ+REPORT+INFORMATION+TYPE+DATA. DATE+ENTERED: 92481. DESCRIPTION: "REQUESTED PEPORT INFORMATION TYPE". ENTERED+BY: "D HARTSCHUH". USE: BOTH. MAKES: MESSAGE: M+10+NELS+SENSOR+REQUESTS+MSG+OUT. OUTPUT FPOM: ALPHA: A+09+NEI S+MAKE+SENSOR+REQUESTS+ALPHA. TRACED FROM: DECISION: CONTENTS+OF+MESSAGE. DATA: D+127+REQ+SEMSOR+TARGET+ID+OF+INTEREST+DATA. DATE+ENTERED: 92481. DESCRIPTION: "IDENTIFICATION OF PROUESTED SENSOR TARGET".

DATA: D+1274RED+SENSOR+TARGET+ID+OF+INTEREST+DATA.

DATE+ENTERED: 92481.

DESCRIPTION: "IDENTIFICATION OF REQUESTED SENSOR TARGET".

ENTERED+BY: "D HARTSCHUH".

USF: BOTH.

MAKES:

MESSAGE: M+10+NELS+SENSOR+REQUESTS+MSG+OUT.

DUTPUT FROM:

ALPHA: A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA.

TRACED FROM:

DECISION: CONTENTS+OF+MESSAGE.

DATA: D+130+A+SCENARIO+GFN+ID+NUM+DATA.

PATE+ENTERED: 30283.

PESCRIPTION:

*SCENARIO GENERATOR IDENTIFICATION NUMPER

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(INITIALIZED DATA)".
     FNTERED+BY: "JOURBS".
     TYPE: INTEGER.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+071+NELS+EMITTER+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+RED+SCENARIO+GENERATION.
DATA: D+130+B+SCENARIO+GEN+ID+NUM+DATA.
     DATE+ENTERED: 30283.
     DESCRIPTION:
         *SCENARIO GENERATOR IDENTIFICATION NUMBER
         (BEFORE SOI)".
     FNTEREP+RY: "JPURBS".
     TYPE: INTEGER.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+066+NELS+E"ITTER+ACTIVITY+GROUND+TRUTH+DATA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: ORIG+PEC+SCENARIO+GENERATION.
DATA: D+130+SCENARIO+GEN+ID+NUM+DATA.
     DATE+ENTERED: 102781.
     DESCRIPTION: "SCENARIO GENERATOR IDENTIFICATION NUMBER".
     FNTERED+BY: "JJF-ES".
     TYPE: INTEGER.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+10+NELS+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+RER+SCENARIO+GENERATION.
DATA: D+133+SECOND+CMDRS+REQ+UPDATE+DATA.
     DATE+EMTERED: 91581.
     DESCRIPTION: "A COMMANDERS REQUIREMENT UPDATE MESSAGE LOCATION".
     ENTEPEDARY: "D HAPTSCHUH".
     RANGE: "IS+MODULATED, IS+NOT+MODULATED".
     TYPE: FNUMERATION.
     USE: BOTH.
     CONTAINED INS
          FILE: F+04+CMDPS+DATA+TO+UPDATE+FILE.
     TRACEU FRUM:
          DECISION: CONTENTS+OF+MESSAGE.
DATA: P+135+SENSPR+ID+DATA.
     PATE+ENTFRED: 91581.
     CESCRIPTION: "IDENTIFICATION FOR A SENSOR".
     FNTEREDORY: "D HARTSCHUH".
     PANGE: "VELS+GPS+1, NFLS+GPS+2, NELS+GPS+3".
     TYPE: FNUMEPATION.
     USE: BOTH.
     MAKES!
          MESSAGE:
                    M+06+MELS+OFBIT+MODIFICATIONS+MSG+IN
          MESSAGE: M+OR+MELS+PRIGRITIZED+SENSOR+DIRECTIONS+MSG+IN
          MESSAGE: M+10+NELS+SENSOP+REQUESTS+MEG+UUT
                    M+11+MELS+SENSCR+SYSTEM+STATUS+MSG+OUT
          MESSAGE:
                    M+14+MELS+TRACK+MESSAGE+MSG+OUT.
          MESSAGE:
```

```
INPUT TO:
          ALPHA: A+10+NELS+MOOTFY+ORRIT+ALPHA
          ALPHA:
          A+15+NELS+PROCESS+PRICRITIZED+SFNSUR+DIRECTIONS+ALPHA.
    OUTPUT FROM:
          ALPHA:
                  A+09+NELS+MAKE+SENSOR+REGUESTS+ALPHA
          ALPHA: A+17+NELS+SFNSDP+STATUS+ALPHA
                  A+20+NEL S+SURVETELANCE+AND+TH4CY+MSGS+ALPHA.
          ALPHA:
     TRACED FRUM:
          URIGINATING + REGULTREMENT:
          URIGHRENHTARGETHINHURCSSHPEFERENCE.
DATA: Del36+SENSOR+MODE+OF+OFERATION+DATA.
     PATE + ENTERFU: 11182.
     DESCRIPTION: ""ODE OF OPERATION OF SENSUR PLATFORM".
     ENTEREDORY: "JUF-NELS".
     RANGE :
       MSDIASURVEILLANCE, SDIASEARCH, ADIASURVEILLAUCE, ADIASEARCH,
   TULE".
     TYPE: ENUMERATION.
     HSF: BOTH.
     CONTAINED IN:
          FILE: F+X4+SENSOP+SIATUS+FILE.
     TRACED FROM:
          UPICIMATING+REQUIPEMENT: URIG+REQ+NELS+EXTERNAL+INTEPFACE.
     HEFERHED BY:
          SUBNET: SELECHECKENEL SESENSUPESTATUSES IN.
DATA: DATATEMSORAPRIDATIVADATA.
     PATE+ENTERED: 100581.
     DESCRIPTION: "PRIORITY GIVEN TO A TASK".
     ENTEREDORY: "O HAPTSCHUH".
     TYPE: THTEGER.
     HSF: BOTH.
     MAKES:
          MESSAGE: H+08+NELS+PRIORITIZED+SENSUR+PIPECTIONS+MSG+IN.
     INPUT TO:
          ALPHA:
          A+15+NELS+PROCESS+PFICHTTTZED+SFNSUR+PIPECTTO'S+ALPMA.
     TRACED FROM:
          DECISION: CUNTENTS+OF+MESSAGE.
DATA: De1 38+TASKING+RESPONSE+DATA.
     NATE - ENTERFOR 91561.
     DESCRIPTION: "PESPONSE TO A TASK".
     ENTERENARY: "D HARTSCHUM".
     PANGE: "CAN+"O, CANT+DO".
     TYPE: FNUMERATTON.
     HSF: BOTH.
     MAKERI
          MESSAGE: M+13+HELS+TASKING+RESPONSES+MSG+ENT.
     OUTPUT FROM:
          ALPHA: A+11+HELS+MODIFY+TASK+ALPHA.
     TRACED FRO41
          DECISIOM: CONTENTS+OF+MESSAGE.
```

DATA: DA139+TASK+WEE+ID+DATA.
DATE+ENTERFD: 91581.

```
DESCRIPTION:
               "IDENTIFICATION OF ELEMENT WITHIN THE TASKING
  WUEUE".
     ENTERED+BY: "D HARTSCHUH".
     TYPE: INTEGER.
     USE: BOTH.
     MAKES!
          MFSSAGE: M+04+NELS+MCDIFIED+TASK+MSG+IN
          MESSAGE: M+13+NELS+TASKING+HESPONSES+MSG+0UT.
     INPUT TO:
          ALPHA:
                 A+11+NELS+MODIFY+TASK+ALPHA.
     OUTPUT FRUM:
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA.
     TRACED FROM:
          UFCISION: CONTENTS+OF+MESSAGE.
DATAL D+140+TBD+DATA.
     DATE+ENTERED: 90481.
     DESCRIPTION: "PRESENTLY UNKNOWN ENTITY SELECTION CRITERION".
     FNTEPED+RY: "JJF-TC".
     INTTIAL + VALUE : TRUE .
     TYPE: BOOLEAN.
     USF: BOTH.
     ASSOCIATED WITH:
          ENTITY+CLASS: FC+1+NELS+DETECTABLE+EMISSION+BRFAHOUT+EC
          ENTITY+CLASS: FC+2+NFLS+SCFNAHTU+EC
          ENTITY+CLASS: FC+3+NELS+TASKS+FC
          EMTITY+CLASS: FC+4+NFLS+THREAT+EC
          ENTITY+CLASS: FC+5+NFLS+VEHICLE+CHARACTERISTICS+FC.
     TRACED FROM:
          URIGINATING+REQUIREMENT:
          URIGHPER+TC+MESSAGES+TO+CONTROL+ANU+UTSPLAY
          UPIGINATING+RECHIPEMENT: ORIGHRECHTC+UPERATOP.
     PEFEPRED BY:
          RENET: REZEMODELENELSESENSORESYSTEMERENET
          SUBNET: 5+1+CHECK+NELS+SENSUR+STATUS+SUR
          SUBNET: S+3+MODEL+NELS+GPS+PPOCESSING+FUR
          SUBNET: S+4+MODEL+NELS+PLATFORM+SUR
          SUBNET: 5+5+MODEL +MELS+SENSOR+SHR.
DATAL P+141+TIME+DATA.
     DATE+ENTERED: 90481.
     DESCRIPTION:
             "TIME FLAPSED BASED ON A 24 HOUR CLOCK!
   A CURPENT PLANS PERIOD LASTS 24 HOURS".
     FNTERED+RY: "JJF-10".
     TYPE: PEAL.
     USE: BOTH.
     MAKESI
          MESSAGE: M+13+NELS+TASKING+RESPONSES+MRG+QUI.
     INPUT TU:
          ALPHA: A+92+GENEPATE+DME+ALPHA
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA.
     OUTPUT FROM:
          ALPHA: A+11+NELS+MCDIFY+TASK+ALPHA.
     THACED FROM:
          URIGINATING+RENDUTHENENT: URIG+RER+TC+CYCLE+START
          ORIGINATING + REUNIPENENT: OPIC+ PEN+TC+SYNC.
```

```
DATA: D+142+TRACK+MESSAGF+PATA.
     DATE + ENTERED: 11182.
     DESCRIPTION: "INFORMATION DESCRIPING A TARGET TRACK".
     ENTEPED+BY: "JJF-NELS".
     RANGE: "TRACKING, CAN+TRACK, WILL+LUSE+TRACK".
     TYPE: FNUMERATION.
     USF: BOTH.
     MAKES!
          MESSAGE: M414+NELS+TFACK+MFSSAGE+MSG+UUT.
     CUTPUT FROM:
          ALPHA: A+20+NELS+SURVEILLANCE+AND+TRACK+MSGS+ALPHA.
     TRACED FROM:
          OPIGINATING + REQUIREMENT: OPIG+PED+NELS+EXTERNAL+INTEPFACE.
DATA: D+143+X+LUC+FEASIBLE+DATA.
     DATE+ENTERED: 100581.
     DESCRIPTION: "X-AXIS LOCATION OF A FEASIBLE TARGET".
     FNTERED+RY: "D HARTSCHUH".
     TYPE: REAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+OS+FFARIALE+ACTIVITY+AREA+FILE.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REG+SENSOR+FEASIBILITY.
DATA: D+144+X+WEATHER+LUC+PATA.
     PATE+ENTERED: 11182.
     DESCRIPTION: "X LOCATION OF WEATHER ALTITUDE DATA".
     ENTEREDARY: "JUF-NELS".
     TYPE: REAL.
     USF: BOTH.
     CUNTAINED THE
          FILE: F+26+NELS+WEATHER+COMUITIONS+FILE.
     TRACED FROM:
          ORIGINATING+REHUIREMENT: OPIG+REG+NELS+STGNAL+TU+NOISE.
DATA: P+145+Y+LOC+FEASIBLE+i)ATA.
     PATE+ENTERED: 100581.
PESCRIPTION: "Y-AXIS LOCATION OF A FEASIBLE TARGET".
     ENTEREPORY: "D HARTSCHUH".
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED THE
          FILE: FOOSOFEASIBLEOACTIVITYOAFEAOFILE.
     TRACFU FRUME
          DRIGINATING+REQUIREMENT: ORIG+PEQ+SENSOR+FEASIFILITY.
DATA: D+146+Y+WEATHER+LUC+DATA.
     PATE + F + TFRED: 11182.
     DESCRIPTION: MY LOCATION OF WEATHER ALTITUDE DATAM.
     FNTEPED+RY: "JJF-NFLS".
     TYPE: REAL.
     HSE: BOTH.
     CONTAINED INE
          FILE: F+20+NFLS+WEATHER+CONDITIONS+FILE.
     TRACED FROM:
          ORIGINATING+REGUIREMENT: OPIG+9EQ+NELS+STG!AL+TU+NOISE.
```

```
DATA: D+147+NELS+EMISSTON+DURATION+DATA.
     DATE + ENTERED: 22443.
     PESCRIPTION:
TIME THAT FMITTER IS EMITTING AND REING LISTENED
TO BY NELS. (DETECTED EMISSION)".
     FNTERED+RY: "JPURSS".
     TYPE: PEAL.
     USF: BOTH.
     CONTAINED IN:
          FILE: F+12+DFTFCTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIGHREG+NELS+ADI.
DATA: D+14R+NELS+EMISSION+SIGNAL+STRFNGTH+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION:
TS/N STDENGTH OF SIGNAL FOR A SINGLE SENSOR; STRENGTH
DATA FROM AT LEAST TWO SENSORS IS REUVIRED BEFORE A DETFCTION CAN
BE CONFIRMED (DETECTED EMISSION)".
     ENTERED+RY: "JOURRS".
     TYPE: PEAL.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETECTEN+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING + REQUIREMENT: ORIG+REQ+NELS+ADI.
DATA: D+149+NELS+EMISSION+START+TIME+DATA.
     PATE+ENTERED: 22483.
     DESCRIPTION: " TIME EMISSION STARTS (DETECTED EMISSIONS)".
     ENTERED+RY: "JOURS".
     TYPE: REAL.
     UNITS: HPS+MIN+SEC.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          ORIGINATING+REDHIREMENT: OPIG+RED+SCFNARID+TIMING.
DATA: D+150+NELS+EMITTER+FRERUFNCY+BANDWIDTH+UATA.
     DATE+ENTERED: 22483.
     DESCRIPTION:
     "HANDWIDTH OF NARROWRAND EMISSION (DETECTED EMISSION)".
     ENTERED+9Y: "JOURBS".
     TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETFCTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
           ORIGINATING + REQUIPEMENT: ORIG+REQ+PHODUCE+SCENARIO.
DATA: D+151+NELS+EMITTER+ID+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "TOENTIFIER OF EMITTER (DETECTED FMISSION)".
     ENTERED+RY: "JOURS".
     PANGE: "RADIO, TANK, TOUCK, PLANE, SHIP, SUR, MISSILF, UNKNOWN".
```

TYPE: ENLIMERATION. USF: BOTH. CONTAINED IN: FILE: F+12+DETFCTED+CANDIDATE+TARGETS+FILE. TRACED FRUM: UPIGINATING+REQHIREMENT: ORIG+REQ+PRODUCE+SCENAKIO. DATA: D+152+NELS+EMITTER+TPANSMISSION+FREQUENCY+DATA. DATE+ENTFRED: 22483. DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (DETECTED EMISSION)". ENTERED+BY: "JOURBS". TYPE: PEAL. UNTIS: HERTZ. USE: BOTH. CONTAINED IN: FILF: F+12+DETFCTED+CANDIDATE+TAPGETS+FILE. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+PER+PRODUCF+SCENARIO. DATA: D+153+NELS+EMITTER+X+DATA. PATESENTERED: 22483. DESCRIPTION: "DISTANCE EAST/WEST (DETECTED EMISSION)". ENTERED+RY: "JOUBBS". TYPE: REAL. UNITS: KM. USE: BOTH. COSTAINED IN: FILE: F+12+DFTFCTEP+CANDIDATE+TARGETS+FILE. THACED FRUME OPIGINATING+REQUIREMENT: UPIG+REO+PRODUCE+SCENAKIO. DATA: D+154+NELS+EMITTER+Y+JATA. DATE+ENTERED: 22483. DESCRIPTION: "DISTANCE NORTH/SOUTH (DETECTED EMISSION)". ENTERED+RY: "JOURBS". TYPE: REAL. UNITS: KM. USF: BOTH. CONTAINED INT FILF: F+12+DETECTED+CANDIDATE+TARGETS+FILE. TRACED FROME ORIGINATING+REQUIPEMENT: OPIG+PEQ+PRODUCF+SCFNAKTO. DATA: 0+155+NEL5+EMITTER+Z+DATA. DATE+ENTERED: 22483. PESCRIPTION: "ALTITUDE/ELEVATION (DETECTED EMISSION)". FNTEREC+RY: "JOUGAS". TYPE: WEAL. UNITS: METERS. USF: BOTH. CONTAINED INT FILE: F+12+DETECTEC+CANDIDATE+TARGETS+FILE. TRACED FROME OPIGINATING+REQUIPEMENT: URIGHEES+PRODUCF+SCENARIO. DATA: P+156+SCENARTO+GFN+ID+NUM+DATA.

CATE + ENTERFOR 22483.

```
DESCRIPTION:
         "SCENARIO GENERATOR IDENTIFICATION NUMBER
         (DETECTED EMISSION) ".
     ENTERED+8Y: "JOURBS".
     TYPE: INTEGER.
     USE: BOTH.
     CONTAINED IN:
          FILE: F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     TRACED FROM:
          UPIGINATING+REWHIREMENT: OPIG+RED+SCENARID+GENERATTON.
DATA: D+157+NELS+EMISSION+DUPATION+DATA.
     DATE+ENTERED: 22463.
     DESCRIPTION:
"TIME THAT EMITTER IS EMITTING AND REING LISTENED
TO PY NELS. (TOUR DO) ".
     ENTERED+BY: "JOURNS".
     TYPE: REAL.
     USF: BOTH.
     INCLUDED IN:
          DATAL DECARACNEL SEESTIMATED + GPOUND + THUTHEDATA.
     TRACED FROM:
          ORIGINATING+REGUIPEMENT: ORIG+RED+NELS+ADI.
DATA: D+158+NELS+EMISSION+START+TIME+DATA.
     DATE+ENTERED: 22485.
     DESCRIPTION: " TIME EMISSION STARTS (TOOM DOIN.
     ENTERED+RY: "JOURSS".
     TYPE: PEAL.
     UNITS: HPS+MTN+SFC.
     USF: BOTH.
     INCLUDED IN:
          DATA: DECASENEL SEESTIMATED + GROUND + TRUTH + DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG#RER#SCENARTO#TTMING.
DATAL DAISOANELSAEMITTERAFREQUENCYABANDWIDTHADATA.
    DATE+ENTERED: 22483.
     RESCRIPTION: "RANDWINTH OF NARROWBAND FMISSION (TODA DO)".
     ENTEREDORY: "JOURBS".
     TYPE: REAL.
     UNITS: HERTZ.
     HISE: BOTH.
     INCLUDED IN:
          DATA: DECORPORED SECTIMATED SMITTER SPARAMETERS PLATA.
     TRACED PROME
          ORIGINATING+RENUIPEMENT: ORIG+RED+PRODUCE+SCENARIO.
DATA: D+160+NELS+EMITTER+ID+DATA.
     DATE+ENTERFO: 22483.
     DESCRIPTION: "IDENTIFIER OF FMITTER (TOUS DOIM.
     ENTEREDORY: "JOURHS"
     PANGE: "RADIO, TANK, TPUCK, PLANE, SHIP, SUP, MISSTLE, UNKNOWN".
     TYPE: FNIMERATION.
     USF: BOTH.
     INCLUDED IN:
          DATAL PERSENTED SEESTIMATED + GROUND + TRUTH + DATA.
     THACED FROM:
```

ORIGINATING+REQUIREMENT: URIG+REQ+PRODUCF+RCENARIO. CATA: D+161+MELS+EMITTER+TRANSMISSIUN+FREQUENCY+DATA. PATE+ENTERED: 22483. DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (TOOK UD)". ENTERED+RY: "JOUBUS". TYPE: REAL. UNITS: HERTZ. USE: BOTH. INCLUDED IN: DATA: D+OBR+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA. TRACED FROM: ORIGINATING*REQUIREMENT: ORIG*REQ*PRODUCE*SCENARIO. DATA: D+102+NELS+EMITTER+X+DATA. DATE+ENTERED: 22483. DESCRIPTION: "DISTANCE EAST/WEST (TODA DD)". ENTERED+BY: "JOURSS". TYPE: REAL. UNITS: KM. USF: BOTH. INCLUDED IN: DATA: DEDAGENELS-ESTIMATED-GROUND-TRUTH-DATA. TRACED FROM: OPIGINATING*REQUIREMENT: ORIG*REQ*PRODUCF*SCENARIO. DAIA: DA163+NELS+EMITTER+Y+DATA. DATE+ENTERED: 22483. DESCRIPTION: "DISTANCE NORTH/SOUTH (TOPA DO)". ENTERENHAY: "JOURS". TYPE: REAL. UNITS: KM. USF: BOTH. THICKHOED IN: DATA: "+089+NELS+ESTIMATED+GROUND+TRUTH+DATA. TRACED FROM: URIGINATING + REQUIREMENT: ORIGHREQ + PRODUCE + SCENARIO. DATA: N+164+NELS+EMITTER+Z+DATA. DATE+ENTERED: 22483. DESCRIPTION: "ALTITUDE/ELEVATION (1004 00)". ENTEREDORY: "JOURBS". TYPE: REAL. UNITS: METERS. HSF: BOTH. INCLUDED IN: DATA: P+089+NELS+ESTIMATED+GFOUND+TRUTH+DATA. THACED FROME ORIGINATING*REQHIPEMENT: UPIG*PEQ*PRODUCF*SCENARIO. DATA: D+165+SCENARIO+GEN+ID+NHM+DATA. PATE+ENTERED: 22463. **FESCRIPTION:** "SCENARIO GENERATOR IDENTIFICATION NUMBER (Thos horm. FNTERED+FY: "JDUBBS".

TYPE: INTEGER. HISE: HOTH.

```
INCLUDED IN:
          DATA: Densembl Seestimate Degrounde Truthe DATA.
     TRACED FROMS
          ORIGINATING+REGUIREMENT: ORIG+REG+SCFNARIG+GENERATION.
DATA: D+166+NELS+EMITTER+ID+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "IDENTIFIER OF EMITTER (REPORT DATA)".
     FNTERED+RY: "JOURBS".
     RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUB, MISSILF, UNKNOWA",
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: 0+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: UPIG+REQ+PRODUCF+SCFNARIO.
DATA: D+167+NELS+EMITTER+X+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "DISTANCE EAST/WEST (REPORT DATA)".
     ENTERED+RY: "JOURNS".
     TYPE: REAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+EMITTEH+PEPORT+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+PEG+PRODUCF+SCFNARIO.
DATA: D+168+NELS+EMITTFR+Y+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "DISTANCE NORTH/SOUTH (PEPOPT DATA)".
     ENTEPEDERY: "JOURSS".
     TYPE: PEAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+MELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FRUME
          ORIGINATING+REQUIREMENT: ORIG+PEQ+PRODUCE+SCENAKIO.
DATA: D+169+NELS+EMITTER+Z+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "ALTITUDE/ELEVATION (PEPOPT DATA)".
     FNTERED+BY: "JDUFBS".
     TYPE: PEAL.
     UNITS: METERS.
     USE: BOTH.
      INCLUDED IN:
          DATA: De113+NELS+TYPED+EMITTER+REPORT+DATA.
      THACED FROM:
           ORIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+170+5CENARTO+GEN+ID+NUM+DATA.
      DATE+ENTERFO: 22483.
      DESCRIPTION:
          "SCENARIO GENERATOR IDENTIFICATION NUMBER
          INFPORT DATA)".
```

```
FNTERED+RY: "JOURGS".
     TYPE: INTEGER.
    USF: BOTH.
     INCLUDED IN:
          DATA: Della-NELS-TYPFD-EMITTER-REPORT-DATA.
     THACED FROM:
          UPIGINATING+REQUIREMENT: ORIG+REG+SCFNARIO+GFNFRATION.
DATA: D+171+WELS+EMITTFR+ID+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "IDENTIFIER OF EMITTER (TOOA DD)".
     ENTERED+RY: "JOURBS".
     RANGE: "RADIO, TANK, TRUCK, PLANE, SHIP, SUB, MISSTLE, UNKNOWN".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: T+065+NELS+EMISSION+THPEAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REG+PRODUCF+SCFNARIO.
DATA: D+172+NELS+EMITTER+TRAMSMISSION+FREQUENCY+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: " TRANSMISSION FREQUENCY OF EMITTER (TDOA DD)".
     ENTERED+RY: "JOURBS".
     TYPE: REAL.
     UNITS: HERTZ.
    USF: BOTH.
     INCLUDED IN:
         DATA: De065+NELS+EMISSION+THREAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+173+NELS+EMITTER+X+DATA.
     DATE+ENTERED: 22463.
     DESCRIPTION: "DISTANCE EAST/WEST (TDOA DD)".
     ENTERED+BY: "JOUBBS".
     TYPE: REAL.
     UNITS: KM.
     USF: BOTH.
     INCLUDED IN:
          DATA: D+065+NELS+EMISSIUN+THREAT+TABLE+DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+174+NELS+EMITTER+Y+DATA.
     DATE+ENTERED: 22483.
     DESCRIPTION: "DISTANCE NORTH/SOUTH (TOOA DD)".
     ENTEPEN+RY: "JOURBS".
     TYPE: REAL.
     UNITS: KM.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+065+NELS+EMISSION+THREAT+TABLE+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCFNARTO.
DATA: P+175+NELS+EMITTER+2+DATA.
     DATE+ENTERED: 22483.
```

```
DESCRIPTION: "ALTITUDE/ELEVATION (TODA OD)".
     ENTERED+RY: "JOUBBS".
     TYPE: REAL.
     UNITS: METERS.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+065+NELS+EMISSION+THREAT+TABLE+DATA.
     TRACED FROM:
          UPIGINATING+REQUIREMENT: ORIG+REQ+PRODUCE+SCENARIO.
DATA: D+176+NELS+EMITTER+BANDWIDTH+DATA.
     DATE+ENTERED: 30383.
     DESCRIPTION: " BANDWIDTH OF EMISSION(S) EMITTER FMITS (REPORT)".
     ENTERED+BY: "JOURGS".
     TYPE: REAL.
     UNITS: HERTZ.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
DATA: D+177+NELS+EMITTER+CEP+DATA.
     DATE+ENTERED: 30383.
     DESCRIPTION:
" CIRCULAR FROP PROBABLE ESTIMATE FOR A NELS
DETECTABLE EMITTER (REPORT)".
     ENTERED+BY: "JOUBBS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          DATA: D+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: OPIG+REQ+NELS+THREAT+TABLE+UPDATE
DATA: D+178+NELS+EMITTER+MODULATION+TYPE+DATA.
     PATE+ENTERED: 30363.
     DESCRIPTION: "TYPE OF MODULATION EXHIBITED BY EMITTER (PFPORT)".
     ENTERED+RY: "JOURBS".
     RANGE: "MODULATED, NOT+MODULATED".
     TYPE: ENUMERATION.
     USE: BOTH.
     INCLUDED IN:
          DATA: P+113+NELS+TYPED+EMITTER+REPORT+DATA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIGHREQ+NELS+EXTERNAL+INTERFACE.
DATA: D+179+NELS+EMITTER+TIME+CF+LOCATION+DATA.
     PATE+ENTERED: 30383.
     DESCRIPTION: "TIME AT WHICH THE EMITTER WAS LOCATED (REPORT)".
     FNTEPEP+RY: "JOURBS".
     TYPE: PEAL.
     USE: BOTH.
     INCLUDED IN:
          UNTA: Della-NELS-TYPED-EMITTER-REPORT-DATA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+PEG+NELS+THREAT+TABLE+UPDATE
```

```
DATAL D+180+NELS+EMITTER+TRAFFIC+TYPF+DATA.
       DATE+ENTERED: 30383.
       DESCRIPTION: " TRAFFIC TYPE CODE FOR A NELS EMITTER (REPORT)".
       ENTERED+BY: "JOURBS".
       RANGE: "PASSIVE, POTENTIAL + THREAT, THREAT".
       TYPE: FNUMERATION.
       USE: BOTH.
       INCLUDED IN:
            DATA: D+113+NELS+TYPFD+EMITTER+REPORT+DATA.
       TRACED FROM:
            ORIGINATING&REQUIREMENT: URIG&RED®NELS&THREAT&TABLE&UPDATE
  DATAL DE181+NELS+EMITTER+MODULATION+TYPE+DATA.
       DATE+ENTERED: 30383.
       DESCRIPTION: "TYPE OF MODULATION EXHIBITED BY FMITTER (TABLE)".
       ENTEREP+BY: "JPURBS".
       PANGE: "MODULATED, NOT+MODULATED".
       TYPE: ENUMERATION.
       USE: BOTH.
       INCLUDED IN:
            DATA: De065+NELS+EMISSION+THREAT+TABLE+DATA.
       TRACED FROM:
            UPIGINATING+REGHIPEMENT: OPIG+REG+NELS+EXTERNAL+INTERFACE.
  UATA: D+182+NELS+EMITTER+BANDWIDTH+DATA.
       DATE+ENTERED: 30383.
       DESCRIPTION: " BANDWIDTH OF PMISSION(S) ENTITED EMITS (TABLE)".
       ENTEREDORY: "JOURSS".
       TYPE: REAL.
       UNITS: HERTZ.
       USE: BOTH.
       INCLUDED IN:
            DATA: MANASANELSAEMISSIOMATHREATATHE E+DATA.
       TRACED FROM:
            URIGINATING*REQUIPEMENT: ORIG#REQ#NELS#EXTERNAL*INTERFALF.
  DATA: D+183+NELS+EMITTER+CEP+DATA.
       DATE+ENTERFD: 30383.
       DESCRIPTION:
  * CIRCULAR ERROR PROBABLE ESTIMATE FOR A NELS
  OFTECTARLE EMITTER (TABLES".
       ENTEPERARY: "JOURBS".
       TYPE: PESL.
       HSF: BOTH.
       INCLUDED IN:
            DATA: D+065+NELS+EMISSION+THREAT+TABLE+UATA.
       TRACED FROM:
            URIGINATINGERFULIREMENT: OPIGERECENELSETHREATETABLEELIPDATE
TRADY COMMANDS
```

LIST THE+FILFS.

FILE: F+02+CARTH+UPDATE+FILE.

```
DATE+ENTERED: 10482.
    DESCRIPTION: "FILE OF CARTOGRAPHIC UPDATES".
    ENTERED+RY: "JJF=NELS".
    CONTAINSE
                D+029+CARTO+SECTION+NUM+DATA
         DATAS
                D+030+CAPTO+UPDATE+1+D4TA
         DATAL
                D+031+CARTO+UPDATE+2+DATA
         DATAL
                D+032+CARTO+UPPATE+3+DATA
         DATA:
         DATA:
                D+033+CARTO+UPDATE+X+DATA
         DATA: 0+034+CARTO+UPDATE+Y+DATA.
    MAKESI
          MFSSAGE: M+02+NELS+CARTO+UPDATES+MSG+IN
         MESSAGE: M+14+MELS+TRACK+MESSAGE+MSG+OUT.
    INPUT TO:
          ALPHA: A+25+UPDATE+CARTU+ALPHA.
    ORDERED MY:
         DATA: P+029+CARTO+SECTION+NUM+DATA.
    OUTPUT FROM:
          ALPHA: A+20+NELS+SURVETLLANCE+AND+TRACY+45GS+ALPHA.
     TRACED FROM:
          ORIGINATING+REUNIREMENT: OPIG+RED+NELS+EXTERNAL+INTERFACE.
FILE: F+04+CMOPS+DATA+TO+UPDATF+FILE.
     DATE+ENTERED: 11182.
     DESCRIPTION: "CUMMANDERS REQUIREMENTS".
     ENTERED+BY: "JJF-NFLS".
     CONTAINS:
          DATA: Denuntinstecmonseregeuphate-uatt
          DATA: D+133+SECOND+CMDRS+REQ+UPDATF+DATA.
     MAKESI
          MESSAGE: M+03+NELS+COMMANDERS+REDUIREMENTS+MSG+IN.
     INPUT TO:
          ALPHA: A+14+MELS+PROCESS+COMMANDERS+PEDUTREMENTS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.
FILE: F+05+FEASIMLE+ACTIVITY+AREA+FILE.
     DATE+ENTERED: 100541.
     DESCRIPTION: "CONTAINS X, Y-AXIS LOCATIONS OF FFASIPLE TARGETS".
     ENTEREDORY: "D HARTSCHUH".
     CONTAINS:
          DATA: De143+x+LOC+FEASIBLE+DATA
          DATA: P+145+Y+LOC+FEASIBLE+DATA.
     MAKESI
          MESSAGE: M+04+NFLS+MODIFIED+TASK+MSG+IN
          MESSAGE: M+OR+NELS+PRIGRITIZED+SENSUP+DIRECTIONS+MSG+I".
     INPUT TO:
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
          AL PHA:
          A+15+HELS+PROCESS+PRICRITIZED+SENSUR+DIRECTIONS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+FEASTBLE+CHECK
          OPIGINATING + HENNIPEMENT: ORIGHPEN+SEMSOR+FFASIPILITY.
FILE: F+06+FLIGHT+PHOFILE+FILE.
     DATE - ENTEREUS 11182.
     DESCRIPTION: "FLIGHT WAYPOINTS FILE".
     ENTERED+PY: "JJF-NELS".
```

```
CONTAINS
          DATAS
                 D+041+FLIGHT+WAYPOINT+X+DATA
                 D+042+FLIGHT+NAYPOINT+Y+DATA
          DATAL
          DATAS
                 D+043+FLIGHT+WAYPOINT+Z+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+3+HELS+FLIGHT+ET.
     INPUT TO:
                  A+02+GENEPATE+DME+ALPHA
          ALPHA:
          (* USED TO GENERATE DME *)
          ALPHA:
                  A+10+NELS+MODIFY+ORBIT+ALPHA
          AL PHA:
                  A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA:
                  A+16+NELS+PPOCESS+RFQUESTFU+OATA+ALPHA
          ALPHA: A-174NELS+SENSOR+STATUS+ALPHA.
     OUTPUT FROM:
          ALPHA: A+10+NEI S+MODIFY+ORRIT+ALPHA
          ALPHA: A+11+NELS+MODIFY+TASK+ALPHA
          ALPHA: A+16+NEL S+PROCESS+REQUESTFO+DATA+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT:
          URIGHRED+GENERATE+PLATFORM+MEASUREMENTS.
FILE: F+07+GROUP+TARGET+LOGS+FILE.
     DATE - ENTERED: 11182.
     DESCRIPTION: "POSITION OF KHOWN GROUND TARGET(S)".
     FNTERED+BY: "JJF-NELS".
     CONTAINS:
          DATA:
                 THOUSE THE OF THE THE THE OF THE THE
          DATA: Dend9+GRNUHD+TARGET+LOC+Y+DATA.
     MAKES:
                    MEDSENELSENONESURVEILLANCEETAPGETEREPORTSEMSGEDUT
          MESSAGE !
          MESSAGE:
                    M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN
          MESSAGE:
                    HE12ENELSESURVEILLANCFETARGETERFPORTSEMSGEGUT.
     INPUT TO:
          ALPHA: A+16+NEI S+PPOCESS+REQUESTED+DATA+ALPHA.
     DUTPUT FROM:
          ALPHA: A+20+NELS+SURVETLLAMCE+AND+TRACK+MSGS+ALPHA.
     TRACED FROM:
          OPIGINATING&REQUIREMENT: ORIG&REC&NELS&EXIFRNAL&INTERFACE.
FILE: F+10+NEL5+CANDIDATF+TARGETS+FILE.
     DATE+ENTERED: 11162.
     DESCRIPTION:
FRELS CANDIDATE TARGETS UNITPUT FROM THE SOI FILTER,
AGI FILTER, AND SIN. THIS SAME INFO IS FURTHER TESTED
IN THE TERRAIN/FOLIAGE SHADOWING PROCESS BUT IS THEM
PUT IN A DIFFERENT FILE".
     ENTEREPORY: "JJF-NFLS".
     CUNTAINS:
          DATAL
                 D+061+NELS+EMISSION+DURATION+DATA
          DATA:
                 Denozener Seemissionesignal estrengimenata
          DATAS
                 DenoserElseEMISSIONESTARTETIMEEDSTA
          DATAS
                 D+073+NELS+EMITTER+FPEDUENCY+BANDWIDTH+DATA
                 D+075+NELS+EMITTER+ID+DATA
          DATAL
          DATAL
                 P+076+NELS+EMITTER+LOCATION+DATA
          DATAS
                 De081+NELS+EMITTER+TRANSMISSION+FREGUENCY+DATA
          DATA: P+130+SCENARIO+GEN+ID+MUM+DATA.
     ASSOCIATED WITH:
          ENTITY-TYPE: ET-10-GRUUND-SHADDWING-CAMDIDATF-TARGETR-ET
```

ENTITY+TYPE: ET+S+NELS+PRF+BRIFFED+SOI+ET ENTITY+TYPE: ET+A+NELS+PRE+BRIFFED+ANI+ET ENTITY+TYPE: ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET. INPUT TO: ALPHA: A+05+NELS+AREA+OF+INTFREST+FILTER+ALPHA ALPHA: A+19+MEI S+SIGNAL+TO+NOISE+DFTECTARILITY+ALPHA ALPHA: A+22+NELS+TERPAIN+FOLIAGE+SHADOWING+ALPHA. **CUTPUT FROM:** A+O5+NEI S+AREA+OF+INTEREST+FILTER+ALPHA ALPHA: ALPHA: A+18+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA ALPHA: A+19+NELS+SIGNAL+TU+NOISE+DETECTAPILITY+ALPHA. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+AOI
URIGINATING+REQUIREMENT: ORIG+REQ+NELS+THREAT+TABLE+HPDATE

FILE: F+13+NFLS+EMISSION+THREAT+TABLE+FILE. DATE+ENTERED: 11282. DESCRIPTION: "FILE OF DETECTED EMITTERS ". ENTERED+RY: "JJF-NELS". CONTAINS: DATA: D+065+NELS+EMISSION+THREAT+TABLE+DATA. ASSOCIATED WITH: ENTITY+TYPE: ET+1+NELS+EMISSION+THREAT+ET. TAPUT TO: ALPHA: A+07+NELS+FINE+LOCATION+ALPHA ALPHA: A+23+NELS+THREAT+TARLE+UPDATE+ALPHA. ORDERED BY: DATA: D+079+NELS+EMITTER+TIME+DF+LDCATION+DATA. **OUTPUT FROM:** ALPHA: A+23+NELS+THREAT+TABLE+UPDATE+ALPHA. TRACED FROM: ORIGINATING+REQUIREMENT: ORIG+RER+NELS+THREAT+TAPLE+UPDATE

FILE: F+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE. DATE+ENTERED: 11182. DESCRIPTION: "MELS SCENARIC DATA". ENTEREDORY: "JUF-NELS". CONTAINS: DATA: D+066+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+DATA. ASSOCIATED WITH: ENTITY+TYPE: ET+2+NELS+EMITTER+GROUND+TRUTH+ET. INPUT TO: ALPHA: A+1R+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA (* USED BUT NOT UPDATED *). ORDERED PY: DATA: D+075+R+NELS+EMITTER+ID+DATA. OUTPUT FROM: ALPHA: A+04+INITTALIZE+NELS+ALPHA. TRACED FROM: OPIGINATING+REQUIPEMENT: ORIG+REQ+NELS+EXTERNAL+INTERFACE.

##LE: F+15+NELS+EMITTER+CHARACTERISTICS+FILE.

A: DATE+ENTERED: 11182.

DESCRIPTION: "NELS EMITTER CHAPACTERISTICS TABLE".

ENTERED+RY: "JJF=NELS".

ENTERED+RY: "JJF=NELS".

```
DATA: D+009+NELS+EMITTER+CHAPACTERISTICS+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+6+NELS+VEHICLE+CHAPACTERISTICS+ET.
     INPUT TO:
          ALPHA: A+1A+NELS+SIGNAL+OF+INTEREST+FILTER+ALPHA
          (* USED BUT NOT UPDATED *).
     OUTPUT FROM:
          ALPHA: A+OU+INITIALIZE+NELS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+NELS+EXTFRNAL+INTERFACE.
FILF: F+16+NELS+EMITTER+FILE.
    PATE+ENTERED: 102781.
     DESCRIPTION: "FILE OF NELS-DETECTABLE EMITTERS".
    FNTERED+RY: "JJF-ES".
    CONTAINS:
          DATA: D+071+NELS+EMITTER+DATA.
     MAKES:
          MFSSAGE: M+01+FS+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+TN.
     INPUT TO:
          ALPHA: A+04+INTTJALIZE+NELS+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIREMENT: ORIG+REQ+SCFNARTO+TIMING.
FILE: F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILF.
     DATE+ENTEPED: 11282.
     DESCRIPTION:
     "FILE OF PARAMETERS ESTIMATED BY TARGET ACQUISITION".
     FNTERED+RY: "JJF-NFLS".
     CONTAINSE
          DATA: D+088+NELS+ESTIMATED+EMITTER+PARAMETERS+DATA
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+11+DFTECTED+EMISSIONS+DD+TDQA+FT
          ENTITY+TYPE: ET+12+DETECTED+EMISSIONS+COARSE+ET
          ENTITY+TYPE: ET+13+DFTFCTED+FMISSIONS+FINE+ET.
     INPUT TO:
          ALPHA: A+06+NELS+COARSE+LOCATION+ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+OR+NELS+FRECUENCY+SCAN+OPTIMIZATION+ALPHA
          ALPHA: A+12+NELS+PERFORM+SIGNATURE+ANALYSIS+ALPHA.
     CUTPUT FROM:
          ALPHA: A+07+MELS+FINE+LOCATION+ALPHA
          ALPHA: A+21+NEIS+TARGET+ACQUISITION+ALPHA.
     TRACED FROM:
          UPICINATING+HEQUIPEMENT: OPIC+REC+NELS+TARGET+4COUISITION.
FILE: F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
     DATE+ENTERED: 11282.
     PESCRIPTION:
             "FILE OF ESTIMATED GROUND LOCATIONS OF NELS
   PETECTABLE EMITTERS".
     FNTEREN+BY: "JJF-NFLQ".
     CONTAINS:
          DATA: Decement Seestimated + Ground + Truthe DATA.
     ASSOCIATED WITHE
          ENTITY+TYPE: ET+11+DETFCTED+FMISSIONS+DD+TDDA+ET
          ENTITY TYPE: ET+12+OFTFCTED+FMISSIONS+COARSE+ET
          ENTITY+TYPE: ET+13+OFTECTED+FMISSIONS+FINE+ET.
```

```
INPUT TO:
          ALPHA:
                 - A+O6+NET S+CCARSE+LOCATION+ALPHA
          AL PHA:
                 A+O7+4EI S+FINF+LOCATION+ALPHA
          ALPHA: A+12+NELS+PFRFDRM+SIGNATURE+AMALYSIS+ALPHA.
    OUTPUT FROM:
          ALPHA: A+Ob+MEIS+COARSE+LOCATION+ ALPHA
          ALPHA: A+07+NELS+FINE+LOCATION+ALPHA
          ALPHA: A+21+NELS+TARGET+ACQUISITIUN+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: OPIG+REQ+NELS+TARGET+ACOUTSITION.
FILE: F+19+NELS+FREQUENCY+SCAN+FILE.
    PATE+ENTERED: 11182.
     PESCRIPTION:
             "THE SET OF FREQUENCY SCAN RANGES TO BE SEARCHED
  EY THE NELS".
    ENTEREDORY: "JJF-NFLS".
     CONTAINS:
          DATA: D+090+NELS+FREGUENCY+SCAN+BAND+DATA.
     ASSOCIATED WITH:
         ENTITY+TYPE: ET+4+NELS+FREQUENCY+SCAN+FT.
     INPUT TO:
          ALPHA:
          4+15+NELS+PROCESS+PPICRITIZED+SFNSOP+DIRECTIONS+ALPHA.
    DUTPUT FROM:
          ALPHA:
          A+15+NELS+PROCESS+PRICRITIZED+SENSOR+DIPECTIONS+ALPHA.
     TRACED FROM:
          OPIGINATING+REQHIREMENT: OPIG+REQ+NELS+STGNAL+OF+INTEREST.
FILE: F+20+NELS+PRE+RRIEFED+ADI+FILE.
     DATE+ENTERED: 11182.
     PESCRIPTION:
     "CONTAINS NELS FILTERING CRITERIA FOR EACH SEAPCH AREA".
    ENTERED+RY: "JJF-NELS".
     CONTAINS:
          DATA: D+094+NELS+PRE+BRIEFED+ACI+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+R+NELS+PRE+BRIFFED+ARI+ET.
     INPUT TO:
          ALPHA:
                  A+05+NELS+AREA+OF+INTEREST+FILTER+ALPHA
          ALPHA:
                 A+14+NELS+PROCESS+COMMANDERS+REDUTREMENTS+ALPHA
          AL PHA:
                 A+17+NELS+SENSOR+STATUS+ALPHA.
     OUTPUT FROMS
          ALPHA: A+14+NELS+PROCESS+COMMANUFRS+PEDUTREMENTS+ALPMA.
     TRACED FRUM:
          DRIGINATING+REQUIREMENT: ORIGHRED+NELS+ADI.
FILE: F+21+NFLS+PRF+9RIEFED+SOI+FILE.
    DATE+ENTERED: 11182.
    DESCRIPTION: "FILE OF RANGES OF FREQUENCIES OF INTEREST".
     ENTERED+RY: "JJF-NELS".
    CONTAINS:
          DATA: D+102+VELS+PRE+BRIFFED+SOI+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+5+NELS+PRE+8RIFFED+SOI+ET.
     INPUT TO:
          ALPHA: A+14+NELS+PPOCESS+COMMANUFRS+PECUTREMENTS+ALPHA
```

```
21-MAR-1983 17:14
                                                            Page 116
          ALPHA: A+17+NELS+SENSUR+STATUS+ALPHA
                 ALTROVELSESIGNAL COFFINTENESTEFILTEREALPHA.
          AL PHA:
     CUTPHT FROM:
          ALPHA: A-14-MELS-PROCESS+COMMANDERS-PEDNITHEMENTS-ALPHA.
     TRACED FROM:
          OPICINATINGHREUNIREMENT: ORIGHREGHMELSHSTGNALHDFHINTFHEST.
FILE: F+24+NELS+TONA+DD+FILE.
     DATE+ENTERED: 11282.
     PESCRIPTION:
             MEILE OF TIME DIFFERENCE OF ARRIVAL (TOUA) AND
   DIFFERENTIAL DOPPLER (NO) MEASUREMENTS RELATIVE TO EACH
   NELS SENSOR PLATFORM".
     FNTEPED+RY: "JUF-NELS".
     FONTAINS:
          DATA: P+112+NELS+TDOA+DD+DATA.
     INPUT TO:
                 A+06+NELS+COARSF+LOCATION+ALPHA.
          AL PHA:
     CUTPUT FROM:
          ALPHA: A+21+NELS+TARGET+ACQUISITIUM+ALPHA.
     TRACED FROM:
          OPIGINATING+REQUIREMENT: ORIG+REQ+NELS+TARGET+ACQUISTTION.
FILE: F+25+NELS+TYPED+EMTTTER+REPORT+FILE.
     DATE+ENTERED: 11282.
     DESCRIPTION: MEILE OF TYPED EMITTER REPORTSM.
     ENTERECHRY: "JUF-NELR".
     CONTAINS:
          DATA: DA1134NELSATYPEDAEMITTERAREPORTADATA.
     INPUT TO:
          ALPHA: A+20+NELS+SURVETLLANCF+AND+TRACK+MSGS+ALPHA
                 A+23+NELS+THREAT+TARLE+HPDATE+ALPHA.
          AL PHA:
     OUTPHT FROM:
          ALPHA: A+12+NELS+PERFORM+SIGNATUPE+ANALYSIS+ALPHA.
     TRACED FROM:
          URIGINATING+REQUIREMENT: ORIG+REQ+NELS+SIGNATURE+AMALYSIS.
FILE: FARA-NELSAMEATHER-COMDITIONSAFILE.
     PATE+EMTERED: 11182.
     DESCRIPTION: "X-Y-ALTITUDE ORDERED WEATHER DATA".
     FNTEPED+RY: "JJF-NELS".
     CONTAINS:
          DATA: DeboteALTITUDE+WEATHER+LOC+DATA
                DE144+X+WEATHER+LOC+DATA
          DATA:
          DATA: De146+Y+WEATHER+LOC+DATA.
     ASSOCIATED WITH:
          ENTITY+TYPE: ET+7+NELS+WEATHER+ET.
     INPUT TO:
          ALPHA: A+19+NELS+SIGNAL+TO+NOISE+DETECTABILITY+ALPHA
          (* USED BUT NOT UPDATED *).
```

FILE: F+27+PLATFORM+CONTPOL+FILE.

DATE+ENTERED: 11182.

DESCRIPTION:

TRACED FPOM:

"LOCATION AND DYMAMICS AT VARIOUS POINT ALONG THE MISSION PATH PPOFILE".

OPIGINATING+REQHIREMENT: ORIG+REQ+NELS+SIGNAL+TO+NOISE.

```
ENTEREDERY: "JJF-NFLS".
     CONTAINS:
          DATA:
                D+010+ASP+ALTITUDE+DATA
          DATA:
                D+014+ASP+LOC+X+DATA
          DATA:
                D+015+ASP+LOC+Y+PATA
          DATA: Deni6+ASP+LOC+7+DATA
          DATA:
                D+022+ASP+VEL+X+PATA
          DATA:
                Den23+ASP+VEL+Y+DATA
          DATA: 0+024+ASP+VEL+7+DATA.
     ASSUCIATED WITH:
          ENTITY+TYPE: ET+3+MELS+FLIGHT+FT.
     INPUT TO:
          ALPHA: A+02+GENERATE+DME+ALPHA.
     TRACED FROM:
          URIGIVATING+REQUIPEMENT:
          ORIG+RED+GENERATE+PLATFORM+MEASUREMENTS.
FILE: F+32+SENSOR+ORRIT+MODS+FTLF.
     DATE+ENTEREU: 10882.
     DESCRIPTION: "MESIRED OBSERVATION POSITIONIS) FOR SENSORS".
     FNTERED+RY: "JJF-NFLS".
     CONTAINS:
          DATA:
                Deli7ePLATFORMemoneXeDATA
          DATA: P+11R+PLATFORM+MOO+Y+DATA
          DATA: D+119+PLATFGPM+MOD+Z+DATA.
     MAKES:
          MESSAGE: M+06+NELS+OFETT+MODIFICATIONS+MSG+IN.
     INPUT TO:
          ALPHA: A+10+NELS+MODIFY+ORRIT+ALPHA.
     TRACED FROM:
          ORIGINATING+REQUIPEMENT: OPIG+PEC+NELS+EXTERNAL+INTERFACE
          OPIGINATING+REGNIPEMENT: OPIG+PEG+SEMSOH+ACTIVITY+FLFMFNTS
FILE: F+33+SFNSOP+PLATFOPM+LOCATION+FILE.
    DATE+ENTERED: 11182.
     DESCRIPTION: "LOCATION OF EACH SENSOR PLATFORM".
     FNTERED+RY: "JJF-NFLS".
     CONTAINS:
                 C+114+PLATFORM+LOCATION+X+DATA
          2 A T A C
                DelisePLATFORMELOCATIONEYEDATA
          DATA:
          DATA: "P+116+PLA.FORM+LOCATION+7+DATA.
    MAKES!
          MESSAGE: MAOTANELSAPLATEORMALOCATIONALEPORTSANSGAOUT.
     OUTPUT FROM:
          ALPHA: A+13+NELS+PLATFOR++LOCATION+MSG+ALPHA.
     TRACED FOUT:
          OPIGIDATING+REUNIFEMENT: URIG+REC+NELS+EXTFFMAL+INTERFACE.
FILE: F+34+SFNSUF+STATUS+FILE.
    DATE+ENTERED: 11182.
    DESCRIPTION: MSENSOR STATUSM.
    ENTEREPORY: "JIFANFLE".
    CONTAINS:
          Data: DendueFRERUERCY+SCAN+PARAMETEH+BATA
          DATA: U+134+SENSPR+MCDF+MF+GPERATION+NATA.
    MAKESI
          MESSAGE: MAILANEL SASENSCRARYSTEMASTATURAMSCAGUT.
```

OUTPUT FROM:

ALPHA: A+17+NELS+SFNSOP+STATUS+ALPHA.

TRACED FROM:

ORIGINATING+REQUIREMENT: ORIGHREQ+NELS+EXTERNAL+INTERFACE.

TRADY COMMANDS

(* SECTION 4 QUALITY ASSURANCE PROVISION *)

LIST VALIDATION+PATH.

TRADX COMMANDE ENG RADX

OXX 007 PEVS COMPLETED: NORMAL TERMINATION.

OXX ONT YOUR NEW DATA MASE IS ON TAPEZ.DAT

DELETE-H-FILNOTDEL, error deteting DISKUSFR1: TREVS.**B51N4ME.*;*
-RMS-F-FNF, file not found

REVS Joh terminated at 21-MAR-1983 17:14:56,01

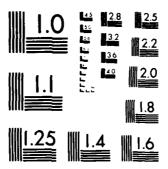
Accounting information:
Buffered 7/0 count: 188 Peak working set size: 512
Direct I/0 count: 1138 Peak mage file size: 4572
Page faults: 255024 Mounted volumes: 0
Elansed CPU time: 0 00:15:13,75 Elansed time: 0 03:54:40,50

MCR-83-553

APPENDIX E

SIMULATION OF THE NELS SUBSYSTEM

AD-A141 632 UNCLASSIFIED		EVALU	ATION	VOLUME O A ST	2(U)	MARTIN	INEERIN MARIET B 84 MC C~0272	TA DENV R-83-55	DOLOGY) ER 3-VOL-2 /G 9/2	<u>!</u>	5/4 NL		
7													



MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963 A

MCR-83-553

USER-CREATED
SDF FILE
FOR SIMULATION GENERATION

```
MSGS, STAT, POST
SSEXOGSTR :
*SSEXOG
   STAT, MSGS, POST : TEXT
  138POSTINGTIME : REAL
  : SS+MEG+SOURCE
                : EFON+002+4SFT+MEG+DEST+DATA
  195+MSG+NAME
                  : EEOD+004+ASFT+MSG+NAME+DATA
                  : EFOD+002+ASFT+MSG+CEST+DATA
  185+MSG+DEST
PROCEDURE SSEXOG (* EXOGENOUS STIMULI *)
  ; BEGIN
    ( NO EXOGENOUS STITULE ARE USED IN THIS SIMULATION +)
  END (* 55FX0G *);
PROCEDURE SSSTARTUP (* STARTUP OF SIMULATION *)
  (* POST THE FIRST MESSAGE TO THE SURSYSTEM AT A)
  (* THE DESIRED SIMULATION START TIME *)
  * BEGIN
    OPEN (MSGS, INELSMSGS, DATI, OLD)
    ; RESET (MSGS)
    ; OPEN(STAT, 'NELSSTAT, DAT', OLD)
    JPESET (STAT)
    19EAD(MSGS, SS+MSG+SOURCE
              , SS+4SG+NAME
              ,SS+MSG+DF3T)
      ID+005+4SET+MSG+SOURCE+DATA:=55+MSG#SOURCE
      10+004+ASET+MSG+NA ME+DATA: #SS+MSG+NAME
      10+002+4SET+MSG+OFST+04TA1=SS+MSG+DEST
    ; EERLDREC (F+16+NELS+EMITTER+FILE)
    : READLN(MSGS, D+063+A+NELS+EMISSION+START+TIME+DATA,
         De064+4+NELS+EMISSION+STOP+TIME+DATA,
         NEMBRESHELSHEMITTER+VFL+X+DATA,
         DEDRICHMELSEL TIERAVELAYADATA,
         D+084+A+NELS+EMITTFR+VFL+Z+DAT4,
         0+073+A+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA,
         D+075+4+NELS+EMITTER+ID+DATA,
         D+085+4+NELS+EMITTER+X+D4T4,
         D+086+4+MELS+EMITTER+Y+DATA,
         D+OR7+A+NELS+EMITTER+Z+DATA,
         Denale 4 enelseem ITTERATEANSMISSION FREQUENCY EDATA.
         D+130+A+SCENAPID+GEN+ID+MUM+DATA)
    ; EESAVRFC (F+16+NELS+EMITTEH+FILE)
    INPENIPOST, 'POSTBET. DAT', OLD)
    ; RESET (POST)
    ; PEADI N(POST, SSPOSTINGITME)
    JEEPSTMFS(M4014ES+NFLS+UNTT+AND+EMVIRONMEMT+DATA+MSGFIN;SSPOSTINGTIMET
  END (* SSSTARTUP *);
PROCEDURE SS41+REST+OF+4SE C+ DUMMY MODEL OF ASET SYSTEM #7
  * REGIN
    (* SINCE THIS SIMPLATION NOBEL POSTS MESSAGES FROM A PRESET *)
```

```
(* FILE, IT DOES NOT NEED TO EXAMINE CONTENTS OF OUTPUT MSGS #)
(* WHILE HEADERS AND FORM MESSAGES UNTIL END OF MSGS FILE #)
WHILE NOT EOF(MSGS) DO REGIN
JREAD (MSGS, SS+MSG+SOURCE
          . SS+MSG+NAME
          , SS+MSG+DEST)
; READLN (POST, SSPOSTINGTIME)
    10+005+ASET+MSG+SOURCF+DATA1#88+MSG+SOURCE
    10+004+ASET+MSG+NAME+DATA: #SS+MSG+NAME
    10+002+ASET+MSG+DEST+DATA1258+MSG+DEST
JCASE D+004+ASET+MSG+NAME+DATA CF
    MN+02+NELS+CARTO+UPDATES: BEGIN
      EEBLDREC (F+02+CARTO+UPDATE+FILE)
      PEADLN(MSGS, P+029+CARTO+SECTION+NUM+DATA,
              D+030+CARTO+UPDATE+1+DATA,
              D+031+CARTO+UPDATE+2+DATA,
              D+032+CARTO+UPDATE+3+DATA,
              D+033+CARTO+UPDATE+X+DATA,
              D+034+CARTO-UPDATE-Y+OATA)
      :EESAVREC(F+02+CARTO+UPDATE+FILE)
      ; EEPSTMES (M+02+MELS+CARTO+UPDATES+MSG+IN, SSPORTINGTIME)
    END
    #MN+03+NELS+COMMANDERS+REQUIREMENTS : BEGIN
      EFBLDREC(F+94+CMDRS+DATA+TO+UPDATE+FILE)
      PEADL NOMSGS, P+540+FIRST+CHORS+REQ+UPDATE+DATA,
              D+133+SECOND+CMDRS+REQ+UPDATE+DATA)
      IEESAVREC(F+04+CMPRS+DATA+TO+UPDATE+FILE)
      PEEPSTMES(M+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN, SSPOSTINGTIME)
    END
    IMN+04+NELS+MUDIFTED+TASK : BFGIN
      READ (MSGS, D+056+NFEPEP+FEASIBLE+DATA,
           D+139+TASK+WUE+ID+DATA)
      #FEBLOREC(F+05+FEASTBLE+ACTIVITY+AREA+FILE)
      JREADLN(MSGS, D+143+X+LOC+FEASIBLE+DATA,
              D+145+Y+LOC+FEASIPLE+DATA)
      ; EESAVREC (F+05+FEASIBLE+ACTIVITY+AREA+FTLE)
      JEEPSTMES(M+00+MELS+MOOTFTED+TASK+MSG+IN, SSPOSTINGTIME)
    END
    #MN+06+NELS+OPBIT+MODIFICATIONS : BEGIN
      READ (MSGS, D+135+SENSOP+ID+DATA)
      ; EERLDREC (F+32+SENSOR+ORAIT+MODS+FILE)
      PEADLNIMSGS, PA117+PLATFORMAMODAX+DATA,
              D+118+PLATFORM+**OD+Y+DATA
              DellerPlatFoRMeMoneZeDATA)
      JEESAVPEC(F+32+SENSON+UMBIT+MODS+FILE)
      PEEPSTMES(M+OA+NELS+OF3) T+MODIFICATIONS+MSG+IN, SSPOSTINGTIME)
    END
    IMN+08+NELS+PPIORITIZED+SENSOR+DIPECTIONS : BEGIN
      READ (MSGS, D+056+NFEMEN+FEMSIPLE+DATA,
           C+135+SEMSOR+ID+DATA
           D+137+SEMSCR+PPIORITY+DATA)
      SEERLDREC(F+OS+FEASIBLE+ACTIVITYFAREAFFILE)
      PEADLN(MSGS, D+143+X+LOC+FEASIBLE+DATA,
              D+145+Y+LOC+FEASIPLE+DATA)
      JEESAVREC(F+05+FEASTRLE+ACTIVITY+AREA+FTLE)
      JEEPSTMES(M+O@+HELS+PRIORITIZED+SENSOP+DIRECTIONS+MSG+IN,
                SSPOSTINGTIME)
    END
    1MN+09+NELS+REQUESTED+SENSUR+DATA : BEGIN
```

MCR-83-553

REVS-CREATED

CF FILE

FOR SIMULATION GENERATION

```
17-Mer-1983 17:42:51
                                                                     VAX-11 F
                                         -------<del>17-Mer-1983-17119139</del>-
                                                                     DICKOUCE
             Source Listing
           COLUMN 1-72 ONLY
(±$U+
           MAKE ALL FILES EXTERNAL
-- (+84+
           PONT APOPT ON COMPILE ERROR *)
 ( *$G+
                      RUN TIME CONDITIONS *)
 (*SDO+,D1+,D3+,D4+
(**XREF(PROCS)*)
 (**DERUG*)
 (*
                                                                   *)
(*
    HEVS GENERATED SIMULATION PROGRAM
   TRW DEFENSE AND SPACE SYSTEMS GROUP, HUNTSVILLE, ALABAMA
                                                                   *)
 (*
 (*
       -----RISF COME FOLLOWS
PROGRAM EFPROGRAM (OLTOUT, EEDF, EESUIF, EESVPRFL
 , MSGS, STAT, PURT
 LABEL
  9999;
CONST
  AASTRLEN = 60;
  EESSINITTIME = -1.0E4;
(* CONST DECLARATIONS FOR SETS PROCEDURES FROM SDF *)
 SSEXOGSTR =
ISSEXOG
 (* RER DEPENDENT CONSTANT DECLARATIONS *)
EFVMAXE 6:
LEMAXCEP= 71
 (*REG IND TYPE DECLARATIONS FROM RISF*)
 TYPE
  ALFA = PACKED ARRAY [1..11] OF CHAR;
  EESTR = PACKED ARRAY [1..AASTRLEN] OF CHAR;
  AASTRING - PECORD
              AALEN: O.. AASTRLEN;
              AASTR: EESTR
           -- END+
 EEVIPTR = TEEVIREC:
 FEVIREC = RECORD
             EEVENT: INTEGER:
             FETIME : REAL!
             FENEXTE: EEVTPTR
           ENDS
  EEDFRECTYP = (EEVATREC, EELISTREC);
  EELISTCODE = (EELALPHA, EELSUBNET, EELRNET, EELEVENT, EELVALPOINT,
               EELINPUTINT, EELOUTPUTINT, EELENTCLASS, EELFILE,
                EELPERFREQ, EELSIMID, EELSIMDATE, EELSIMTIME);
 EEDEF = RECOPD
         CASE EFRT : FEDFRECTYP OF
         EEVNTREC : (
          ETYTHUM: 0. . EEVHAX;
         EFYTNAM: AASTRING!
          EFVTTYP: (EEIMMED, EEDELAY, EEINFACE, EEOUTFACE);
          LEDELHAM: AASTRING;
          EFDFPPTRI: 1. EEMAXDEP;
          EFDEPPTRE: 1. EFMAXDEP
         EELISTREC : (EENAMECODE : EELISTCODE)
                     EFNAMESTR : AASTRING )
```

```
FEOF+27+PLATFORM+CONTOPL+FILE, EFOF+28+PRIMARY+ROADS+FILE, EFOF+29+RAILHOAD+LUCATIONS+FILE, EFOF+30+RTVFR+LOCATIONS+FILE,
               EFOF+31+SFCONDARY+ROADS+FILF, FEOF+32+SENSOR+ORBIT+MODS+FILE,
                EFORETS+ SECSOREPLATFURM+LOCATTON+FILE,
                EFORATHASENAGOARTATUSAFTEF.
                  ANTAFSANTE SANTTAM (HELVIRON LATABATAAMSGAIN,
                <+0>+1
<+1</p>
<+0</p>
<+1</p>
<+1</
                CADRAMEL SACOMMANDERSARERUTREMENTSAMSGAIN.
               Hender CLS+MODIFIER+TASK+MSG+IN.
                · +UX+1ELS+OPHTT+MODIFICATIONS+MSG+IM,
                THATALUELS + PP 17 * TITLED+SFNSOP + DIPECTIONS + MSG+IN,
                WHOCH THE SHAFE TESTED + SENSURA PATACHSGOLD,
                   FIRETER APPRESTOPENFLSE ASSETN.
                CHURA SEL SAMONASURVETLE ANCHATARGETAREPORTSAMSGADUT.
                HEATENEL SEPLATENRY LOCATION EREPORTS EMAGEOUT.
                ** 18+1-61 S+SF & SUR+PENNESTS+MSG+OUT,
                CHITALEL GARRASONARYSTEMASTATUSAMSGAOUT,
                 HELDET EL SESTIRMETEL ANCHETARGETEREPORTSENSGEOUT.
                HATHAMAL SAT PACKA MEGRAGEAMREAUNT,
                EGUSTALCAGROSSUASSIADONINGACANOLDATEATARGETSAET.
                ECURTOSE IFLICE INFORTEREDABLICATION
                FEDERAGEDELS-PRE-BRIEFED-ADT-FT.
                EFORTHMANTS ALEMBISFACAMBIDATEATARGETSAFT.
                THE INTERPRETATION OF THE PARKET OF THE PROPERTY OF THE PROPER
                ebox 1634 4F1 S4FL 1941T4FT, FEDET44NELS4FREDUENCY4SCAN4FT,
                FEDETALANDI SAFATSSIONATURFATAFI.
                EFORTHSH AREREVENTOLF HORAKAC FERISTICSHET,
                FRUSTALLAGO TERTFORE "ISSTO" SAUDATODA LET.
                EFRETALZADETECTSOALDISSTO SECOAPSEAET.
                PRINTELS - CONTROL - ETISSTO SEFTEEFT ):
EEDU-142-134CK+05SSAGE+04TA=(TRACKING,CAM+THACK,WILL+LOSE+TRACK);
FEOSELTHANKI'GEFESPUNSEEPATA=(CAMEDO,CANTEDO);
FRODE 1254AF . + DESTI ATTOMESE YSONETDENATA = (GPSENELSEL, GPSENELSEZ)
                6-15-45(5+3);
FEMOLOGISFROSF [CENSTA=(CFS+1+)FIS, GPS+2+HFLS, GPS+3+NELS);
FEBRAL 35.0E . SO LATERDATA = (FELSACRS+1, SELSAGPS+2, NFLSAGPS+3);
 RETOIND THE ASETHY SHE HAME + DATAW!
                  MILEOTAR SAME SAUNT THAM DAR AVERDINENTADATA.
                  TOLEAREDE LIGHCARIOHUPDATES, MONOSHDELSHCOMMANDERSHRERUIREMENTS.
                  ROGENSE FILSE UNIFIEL ETASK,
                  COLONGE CONTRACTOR OF THE CONTRACT OF THE PROPERTY OF THE PROP
                  d teaners use mentre unifications,
                   GREATE OF LIST OF STEURISELOCATION - SESOUTS,
                  WEARHARE SAPRIOPITIZE DASE'S "KAOTHFOTIONS,
                   + +69+ .FLS+ :EDUFSTEN+SENSOR+DATA, HN+10+MELS+SFNSOR+REQUESTS,
                   · FILE FLEESENSTHE SYSTEMESTATIS.
                   HIGH SENTER A SUN VOIL ENTERTARMET PREPORTS.
                  N #15+NFLS#TASKING#RESPONSES, "N#14+NELS#TRACK#NESSAGE,
                    WE154 THAT I HE + STUPH WELS);
 FFOWERCHEASETENSGENESTEDATA=(IC,FS,ASE,HTI,C3I,HELS,MELS,IS,
                  TOMORFRATORI:
 FED: +1264564 SOFFF COEFIFF OF FRATTOMENATA = (SUTESUPVETEL ANCE, SOTESEARCH
                  , anteson as II U to CE, Ansest APEN, Tollets
 ELCOMINATORIO INTENTIONACATION ONE, ORIZZLE, PAIN, SNOW, SLEET, HAIL, RIME
```

```
FECO+0374CLQUO+COVER+DATA=(CLEAR,PARTLY+CLQUDY,MOSTLY+CLQUDY,
     UVERCAST, FORGY, SHOG, DUST);
FEOD+095+NFLS+PRF+BRIEFEC+AOI+FILTFRING+CRITERIA+DATA=(WITHIN+AREA,
     WITHOUT+AREA);
FEOD+181+NFLS+EMITTER+MODULATION+TYPE+DATA=(MODULATED,NOT+MODULATED
     );
EFOURD 1- FLSEEMTITER + TRAFFIC + TYPE + DATA = (PASSIVE, POTENTIAL + THREAT,
     THREAT);
FEOD+075+NFLS+FM]TTEP+IC+DATA=(R40TO,TANK,TRUCK,PLANE,SHIP,SUB,
     *TRRILE,UNKYOWN);
EEOD+135+SFCOWO+CMORS+REQ+UPDATF+DATA=(1S+MODULATED,
     IS+"OT+"OFULATED);
FEGUAGGOAFTRSTACMORSAREGALIPOATEAGATA=(INAAPEA,GUTSTDEAAREA):
FEOD+030+C4RTO+UPD4TF+1+D4T4=(RRIOGE,RAILRDAD,P+ROAD,S+ROAD,CITY,
     RIVER, MARSHALLING, HYPSO1;
FETIMETT = (FESMULL, EESNEW, EESOLO);
EETCHAP = (FEALTH, EFAGTY, EEALBL, EFAUND) :
FETUSATHOS (FEECATASET, EFECLASS):
FETO KNAPTYP = (RESUMENHAVALT)
FETILATE = TEETINTYP:
FETOSPIR = TEETOSTYP:
FETOSTO = PACALO APPAY [1..65] OF CHAR;
EETSVIYP = RECORD COS: EETDSLST:
                   CIM: FF7TNPTR
                   END;
SETOSTYP = RECORD
     OSKING : FETOSKING:
OSTYP : FETOSLST:
     CASE ECTUSKING OF
           TEKAKTASET : (
                ent.Ent.CIN : EFTINETE:
                            : INTEGER:
                THUME
                            : EETTSPTP:
                SITTS
                FFLCT
                                1 THTEGER!
                USTI
                            1 EETTNETT:
                            : FF7TALST:
                TITYP
                CLASS
                            : EF77SLST
                        );
          FENCHASS
                      : (
                BOC. ECC. COS : EFTOSLST;
                            # BOOLEAN#
                MES
EE71517P # RECORD
                     + FETINETRE
     HEAV, FLAV
     DSLAW
                     : EE7USPTH;
                     : FETINLST:
     I ITYP
                     : FETOSLAT;
     CALAS
     COTO
                     t THITERERS
                     : SUDLEAM;
     21.10
     CASE ELTIBLET UF
           FEINGIN: ():
           EEOF+01+BRIDGE+LOCATIONS+FILE:(
                ECOFFOIF-BRIDGE-LOCATIONS-FILE : RECORD
                OF JOHNHAR INGERLUCEY + DATA : REAL ;
                OFC2/FREINGEFLUCFYFDATA:REAL
                E401 1
```

```
FEOF+U2+CAPTO+UPDATE+FTLF: (LEOF+02+CARTO+UPDATE+FILE
      1 RECORD
     0+029+CARTO+SECTION+NUM+DATA:INTEGER;
     D+030+CARTO+UPDATE+1+DATA1
     EEODEO30+CARTO-UPDATE+1+DATA:
     C+031+CARTU+UPDATF+2+DATAI
     ESON+030+CARTO+UPDATE+1+DATA;
     BED 324CARTOEUPNATE+34NATAS
     EFON+030+CARTO+UPNATE+1+DATA;
     D+033+CARTO+UPDATF+Y+DATAIREAL;
     DEG 34+CARTO+OPDATE+Y+DATA1HFAL
FEOF+03+CITY+LOCATIONS+FILF: (EFOF+03+CITY+LOCATIONS+FILE
      1 RECURD
     DEUSSECTTYELOCEXETATA:REAL;
     MAG36+CTTY+LUC+Y+DATAIRFAL
     E 40)
FERFAGRATION ISABATAATOA IPPATEAFILFIC
     EROSEOGECATORSEDATAETCEUPDATFEFTILE : RECORD
     GHOUGEFIAST+CMOPS+RFU+UPDATE+PATAI
     ETHOLOGICHTISTATMORRAPEDA JPOATEADATA;
     U+1334SECONO+CMORS+REO+UPOATE+DATA1
     EFOO+153+SECOND+E KORS+HFG+UPDATE+DATA
FROM HOREFEAST ALEGARTIVITY CARRACETLES (
     FEGFESSEFFASIBLE + ACTIVITY + AREA + FILE : RECORD
     U+145+X+LAC+FEASIALF+DATA:REAL;
     DELISEYELUCHFFASTBLEEDATAIREAL
     E40) :
FROM + GA+FLIGHT+P9OFILE+FILE:CEFOF+06+FLIGHT+PROFILE+FILE
      1 2F2959
     U+041+FLIGHT+X4YF7[!!T+X+DATA:REAL:
     HARDALAFU ICHTHNAYPOINTHYHDATAIPEALI
     D+043+FLIGHT+MAYP714T+Z+DAT&: REAL
     E101 9
FECFEGIAGROUP+TARGET+LOCS+FILE:(
     RESERVATOR CONTRACTOR OF THE PECORD
     DEG48EGRADINGETARGETELOCEXEDATA:REAL!
     11+049+69011160+TARGET+LOC+Y+DATAIREAL
     £501 :
FEOF+OREHYPSOEDATAEFTEF: (EFUFEO8EHYPSOEDATAEFILE
      : იგიცით
     DENSIFHYPSOFELEVEDATA: KFAL;
     U+052+HYPSOHLOC+X+UATA:REAL:
     SEO536HYPSO4LOCAYEDATA:REAL
     E"01 :
FEOFED94 MARSHALL INGGARFASGFILE ! (
     EFREE-09-MARSHALLING-AREAS-FILE : RECORD
     LAGSAAMARRALL THEAXADATA: PEALS
     DOOSSOMARSHALL INGOVOLATAIREAL
     END) :
FEOF+10+MELS+CANDIDATE+TAGGETS+FTLE10
     FF0F+10+NFLS+CANOTDATE+TARGETS+FILE : RECORD
     CHURTHOSESHEMISSION HE HRATION + DATAIRFALT
     MAGAZAMFLSAFMISSIMMASIGMALASTPENGTHADATAIREAL:
     1,+043+NFLS+FMISSION+START+TIMF+DATA:RFAL;
     1 +073+NFLS+FMTTTES+FREGIENCY+FAMDWINTH+DATAIREAL;
```

```
D+075+HFLS+EMITTEP+ID+DATA:
     EFORMUTS+NELS+EMITTEH+ID+DATA;
     H+CM1+RELS+EMITTER+THANSMISSION+FREQUENCY+DATA:REAL:
     DEDRESHNELSERATTEREXENDATAIRFAL;
     DAGSHARFLESHEMITTERAYADATAIREALI
     PAGRIANTLESAF ATTTESAFATATREALS
     NETROESCENATIOEREMETOENUMEDATA:INTEGER
    £ 244) $
SEAF+12+AETECTEB+CANDIDATE+TARGETS+FILE:(
     EFOF+12+DETECTEN+CAMDIDATE+TARGETS+FILE : RECORD
     HATATANELSAEMISSIONADURATIONADATA:REAL:
     . +146+AFLS+FMTSSION+STGNAL+STRENGTH+DATA:REAL:
     HE1494-VELSEFMISSIONESTAPIETIMEEDATA: REAL:
     HAISQAMELSAEMTITERAFREGUENCYABANDWIDTHADATAIREAL;
     D+151+NFLS+FMTTTER+TC+DATA:
     EFOR+075+"ELS+EMITTFK+ID+DATA;
     DAISZAMFLSAFMITTERATRANSMISSIONAFREQUENCYADATAIREALI
     MAISSANELSAEMITTEPAXADATA:REAL;
     HE154ENFLSEFMITTEREYERATA: REAL;
     0+155+NELS+EMITTER+7+DATA:REAL;
     D+156+SCENARIC+GEN+ID+NUM+DATA:INTEGER
     END) :
ELOF#13+NELS+EMISSION#THREAT#TABLE#FILE:(
     EFCF+13+NFLS+FMTSSION+THREAT+TABLE+FILE & RECORD
     C+079+GELS+FETTTER+TIME+OF+LOCATION+DATA:REAL:
     L+080+AELS+EMITTEP+TRAFFIC+TYPE+DATA:
     EECH+080+NELS+EMITTER+TRAFFIC+TYPE+DATA;
     D+171+NELS+EMITTER+ID+DATA:
    RECOMO75+MELS+EMITTER+ID+DATA;
     1.+172+NELS+FMTTTER+TRANSMISSION+FREQUENCY+DATA:REAL;
     N+173+NFLS+FMTTTER+X+DATA:REAL;
    DelTHeNELSEEMITTEREYEDATA:REAL;
     U+175+NELS+EMTTTEG+7+DATAIREAL;
     C+181+NELS+EMITTER+MUDULATION+TYPE+DATA:
   . FEQD+181+NELS+EMITTER+MODULATION+TYPE+DATA;
     S+182+KFLS+EMITTED+RANDWIDTH+DATA:REAL;
     THIRSHELSHEMITTERHOLPHNATAIRFAL
    Edla :
FERF+14+MELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE:(
    EFOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE
      : SECURD
     DAUGSERENELSEEMISSIONESTARTETIMEEDATA: REAL;
     SHOUGH WELSHEMISSION HSTOPHTIME HONTAIREAL!
    Dec734a+NELS+EmitteR+FREQUENCY+BANDNIDTH+DATA:REAL;
     PHU75+HARELS+FMTITER+JD+D4T41
     LFOR+075+NELS+EMITTFR+ID+DATA;
    D+081+H+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATAL _____
     4: AL :
     O+072+NFLS+FMITTEP+VEL+X+DATAIRFAL;
     L+053+HELS+FMITTER+VEL+Y+DATA:REAL:
     U+CA4+NELS+5 ATTTEP+VEL+Z+DATAIREALI
     D+G55+H+NFLS+EMITTER+X+DATAIREAL;
     LeGacemenels+Emitter+y+DatairEal;
     CHOM7+HANFLS+FMTTTEP+7+DATA:RFAL;
     U+130+3+SCENARIO+GEM+ID+NUM+DATA:INTEGER
     E - 1 :
FENFEIRE JELSELMITTERECHARACTERISTICSEFILES
```

```
EFOF+15+NELS+EMITTER+CHARACTERISTICS+FILE : RECORD
     HADA74NELS4EMITTER4RANDHIDTH4DATA1REAL1
     G+077+4+NFLS+FMITTER+MODULATION+TYPE+DATA1
     FFOO+1814"ELS+EMITTFR+MODULATION+TYPE+DATA;
     NAGTHEACHTERAPOWERALEVELADATAIREAL
    F10) :
FEOF+14+GELS+EMITTER+FTLF: (EEOF+16+NELS+EMITTER+FILE
     1 PECUPE
     D+063+A+DELS+EMISSION+START+TIME+DATA:REAL;
      +CS4+A+NELS+FMISSION+STOP+TIME+DATAIREAL;
     HAG 754A4NELSAFMITTERAFREDHENCYARANDWIDTHADATA&REAL&
      +175+A+NFLS+F+TTTER+TD+D4TA:
     EF30+075+NFLS+EMITTER+ID+DATA:
     ...ORI+A+NFLS+FMTTTER+TRANSMISSION+FREQUENCY+DATA:
     SHESREAL FLOOR SHEATTTER - VELEX + DATA : REAL ;
     DEGP3+4+NFLS+FMITTER+VEL+Y+DATAIRFAL;
     1 40 344A+NELS+FMITTED+VEL+Z+DATA:REAL;
      + 3 F 5 + 4 + NELS + FRITTER + X + MATAIRFALS
     LAUNANAA-AFLEAEMITTERAYADATA&REAL
     U+087+A+NFLS+FMTTTEP+7+PATAIREAL;
     DE170+4+SCE! ARICHGENETDENUMEDATA: INTEGER
     F 403 1
FE FF 174 IF I SEF STT MATE DEEMITTER PARAMETERS OF ILE!
    FFOFETTENFLS+FSTIMATEN+FMTTTER+PAPAMETERS+FILF
      1 5Ft350
      .40776NFLS4FHTTTES4HDOULATION4TYPE4DATA:
     FFORHISTENSHERITTERAMODULATIONATYPEADATA;
     DEGRACHEL SEFENTITEREPOWERFLEVEL + DATAIREAL;
     ZAIF PA IF LISAF MITTERAFREGUENCYABANDWIDTHADATA: REAL:
     PALETA AFLISHE MITTERATH ANSMISSIONAFREDUENCYADATA (REAL
     F^{(\lambda_{i+1},\lambda_{i+1})} = \mathfrak{g}
FFFF+19+1ELS+ESTIMATED+GPUHAM+TRUTH+FILE:(
     FFUF+18+MFLS+FSTIMATEM+GROUND+TRUTH+FILE : RECORD
     Jedadelft Sermitterereredenatairrati
     - 415740 FLS4FMTSSION+UPRATTON+DATATREALT
     JE15- GLSEFMISSITHESTARTETTMEEDATARREALS
     . #1 AUCH PERFETTI TO ALL TALL
     EFESTANTSAMELISAEMITTERALIMANATAL
     . +142+1FLS+EMTTTER+X+DATAIRFAL:
     OwloSelELSEEMTTTEREYEDATAIREALI
     SHINGE FUSHER TITTEREFORTATAIRFALT
     1+145+SCE+APIC+GEH+TU+NUM+UATA:INTEGER
     t ...t. ) ;
FERHALIPARELSAFFERUFARYASCANAFILE:(
     PROFF194%FLS+FREQUENCY+SCAN+FILE : RECORD
     Ubdarberflaffkehberambi Omerbfreqbdataireali
     CAL OSEVEL CAFACILESCANA UPDERAFRACIADATA : REAL
     6173 :
EECHEZON LEGSEPPHERRIFFFDEAGIOFILFIC
     FFOF +>0+AFLS+PPE+PRIEFED+AUT+FILE : RECORD
     FECO+005+AFLS+PRF+0RTEFEC+4QI+FILTERING+CRITERIA+DATA
      +CP/+CFLS+PHF+PRTEFED+AUT+LOWER+LEFT+X+DATA&REAL&
      ACOMA. FL CASWEADATEFED + ANTALOWERALEFTAYADATA : REAL!
      +1 10+ FLS+FRE+TRIEFET+ADI+PPER+RIGHT+X+DATA:RFAL;
```

```
D+101+NELS+PRE+RRIEFED+ADI+HPPER+RIGHT+Y+DATA1REAL
      £ 20} ±
FEAF+21+MELS+PRE+dRIFFFD+SAI+FILE:(
     EFOF+21+NELS+PRE+BRIEFED+SOI+FILE & RECORD
      C+103+GELS+PRE+RHIEFED+801+FND+FREQ+DATAIREAL)
     1+174+NFLS+PRE+HRTEFEN+SUI+FREG+DATA:REAL:
     C+105+NFLS+FRF+HRTEFEH+SOT+HODULATION+TYPE+DATA:
     EFON+181+NELS+EMITTER+MODULATION+TYPE+DATA;
     L+100+NELS+PRF+PRTEFF3+SOI+START+FREQ+DATAIREAL
      t () :
FEOF+24+4ELS+TDGA+DD+FILF:(EFOF+24+NFLS+TDGA+DD+FILE
      : 5FCOR0
     PAUSCAMELSANDA1+2+UATA:PEAL:
     U+US9+NFLS+DD+1+3+0AT4:RFAL1
     C+CAO+FEC9+PU+2+3+UATAIREBLI
     E+109+NFLS+TOOA+1+2+DATA:REAL;
     HELLIGHTE CATE CALLES AD ATA : REAL ;
     1.+111+>FLS+TO04+2+3+1,4T4:064L
     E ... ) :
FEOFERSHIELSHIYPFOHENITIFRHKEPOHIHFILE:(
     FFUF+25+NFLS+TYPEN+FKTTTER+REPORT+FTLE : RECORD
     1 +070+NFLS+FMITTED+CUV+DATAIRFAL;
     DEUTHENFLISEENTITEREFREUDENCYEDATA: REAL;
     I +1 TOFFEELSFETTTERFTUFBATA:
     ESCHEN75-NELSEEMITTEHEINENATA;
     LAINTAKELSAEMTTTERAYADATA:REAL:
     CHISSENTITEPEYEDATA: REAL;
     PHI SHENFESHEMITTERATATATHEALT
     LETTUESCEMARICEGEMETDENUMEDATA: INTEGER;
     SELTERNELS + EMITTER+BAND VIDTH+DATA: REAL;
     1 +177+ HELSHEMITTE PHOEFHRATAIREAL;
     1 41764NFLS4F MTITEP+ MCOULATION+ TYPE+DATA:
     FFCF+181+NELS+EMITTFR+MODULATION+TYPE+DATA;
     D+179+DELS+EMITTED+TIME+DF+LOCATION+DATA:REAL:
     LAIFUANFLEAENTTTERATRAFFICATYPEADATAL
     FFCT+CBM+MELS+EMITTFR+TRAFFIC+TYPE+DATA
     F -1 ) :
£ECF+26+MELS+HFATHER+CONDITIONS+FILE:(
     FFGF+20+NFLS+WEATHER+CONDITIONS+FILE : RECORD
     E+037+CLGPD+CCVFR+D4T4:EEOD+037+CLQUD+CQVER+DATA;
     L+039+ELEVATION+ AEATHER+DATA : REAL;
     U+120+FRECIFITATION+DATA:FEOU+120+PRECIPITATION+DATA
     U+194+X+HEATHER+LOC+DATA:REAL:
     THINGHY CHEATHENOL OCCUMENTAIREAL
     f L) :
ELOF+27+PLATFORM+CONTROL+FILF:(
     EFOF+27+PLATFORM+COMIRGL+FILE : RECORD
     UEU1UEASPEAL TITUUFEDATAIRFAL;
     D+U14+ASP+LOC+X+UATA:REAL:
    HECTSEASPELOCEYEDATAIREAL;
     Degine ASP+LUC+Z+DATA: PEAL;
     C+G22+ASP+VFL+X+DATA:PEAL:
     1 +OZ SHASHAVELLYHLATAIPEAL;
     SHU24HASPHVELHZ+DATA:REAL
     END) :
```

FEOF+28+PHIMARY+FOADS+FILE: (FEOF+28+PHIMARY+ROADS+FILE

E+005+ASET+MSG+SOURCE+DATA:

```
17-Mar-1983 17:42:51
                                                        VAX-11 P
                                17-Mer-1983 17:19:39
 Source Listing
                                                        DISKSUSE
    EFOR+002+ASET+MSG+DEST+DATA:
    U+045+GPS+ID+DATA:EEUD+045+GPS+ID+DATA: .......
    EFITINE : RFAL
    END) 1
M+15+1+AND+C+STOP+NELS+MRG+IN1(
    #+15+T+450+C+STOP+NFLS+MSG+IN : RECORD
    0+612+ASET+MSG+DEST+DATAIREOD+012+ASET+MSG+DEST+DATA
    D+004+ASET+MSG+NAME+DATA: FEOD+004+ASET+MSG+NAME+DATA
    DAGGE TAMBGASQUECEADATAL -
    EEGD+002+ASET+MSG+DEST+DATA;
    FEITIME: REAL
    · filliphi · f
M+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+M8G+OUT:(
    ++05+MELS+MON+SHRVETLLANCE+TARGET+REPORTS+MSG+OUT
     + SFCORD
    E+COZ+ASET+MSG+PEST+DATA: FEOD+OOZ+ASET+MSG+DEST+DATA
    G+004+ASET+MSG+NAME+DATATEE0D+004+ASET+M8G+NAME+DATA-----
    D+005+ASET+MSG+SOURCE+DATA:
 ....EFOD+002+ASFI+MSG+DEST+DATA;
    D+045+GPS+ID+DATA:EEOD+045+GPS+ID+DATA;
    D+046+GPOUND+TARGET+FREDUENCY+DATA:REAL;
    - O+G47+GROUND+TARGET+LENGTH+DATAIREAL; -------
    U+050+GROUND+TARGET+VELOCITY+DATA:REAL:
    EESTIME: REAL
    E-1417 ...
M+C7+NFLS+PLATFORM+LOCATION+REPORTS+M8G+OUT:(
    M+07+MELS+PLATFORM+LOCATION+REPORTS+MSG+OUT
    .. : RECORU.
    D+002+ASET+MSG+DEST+DATA:EEOD+002+ASET+MSG+DEST+DATA
D#005+ASET+MSG+SOURCE+DATA:
    EF-OD+002+ASE I+MSG+DEST+DATA;
    LEITIME : RFAL
    Ē"5) :
MATOANELSASENSORAREQUESTSAMSCADUTE(
    ##10+"ELS+SENSOR+PERUFSTS+MSG+OUT : RECORD
    D+002+49ET+MSG+DEST+DATA:EE0D+002+ASET+MSG+DEST+DATA
    D+004+ASET+MSG+NAME+DATA:FEOD+004+ASET+MSG+NAME+DATA
    De005-ASET-MSG-SOURCE-CATA:
    EFG 74002+ASET+MSG+DEST+DATA:
    ## 125+REQ+DESTIMATION+SENSOR+ID+DATA:
    EFUD-125-REC-DESTINATION-SENSOR-ID-DATA;
     D+126+REQ+PEPORT+INFOPMATION+TYPE+DATA1EETUNKNWNTYP1
    0+127+PFR+SFNSUR+TARGET+ID+0F+INTEREST+DATA:
    EE7:INKNANTYPJ .....
    U+135+SFNSOR+ID+DAT4: FEOD+135+SENSOR+ID+DATA;
    EFITIME : REAL
     f 40) ;
"+11+4FLS+SEMSOR+SYSTEM+STATUS+MSG+OUT!(
```

```
17-Mer-1983 17:42:51
                                                       VAX-11 P
                                17-Mer-1983 17419439
                                                      DISKSUSE
 Source Listing
     M+11+MELS+SENSOR+SYSTEM+STATUS+MSG+OUT & RECORD
     U+Un2+ASET+MSG+DEST+DAT4:EEOD+OO2+ASET+MSG+DEST+DATA.....
     2-004+ASET+MSG+NAME+DATA:EEOD+004+ASET+MSG+NAME+DATA
     T+005+ASET+MSG+SUURCE+DATA:
     EFUD+002+4SET+MSG+UFST+PATA:
     DAL354SENSOR+ID+DATALFEDD+1354SENSOR+ID+DATAL -
     FEITIME : REAL
     E40) ;
Me12+NFLS+SURVEILLANGE+TARGET+REPORTS+MSG+DUT&C
     MAIZAMELSASURVETLLANCFATARGETAREPORTSAMSGAOUT

    RECORD

     U+002+ASET+MSG+DEST+DATA:EE0D+002+ASET+MSG+DEST+DATA......
     D+004+ASET+MSG+NAME+DATA:EEOD+004+ASET+MSG+NAME+DATA
     D+005+ASET+MSG+SOURCE+DATA:
     EFOR+002+ASET+HSG+UEST+RATA:
0+046+GRUHNO+TARGET+FREQUENCY+DATA:REAL;
     8+847+GROUND+TARGET+LENGTH+DATAIREAL;
 ___ D+050+GRO IND+TARGET+VELOCITY+DATAIREAL;
     ETITIME: REAL
     2"0) ;
Mel3enFLSeTASKINGeRESPONSESeMSGeOUT:(
     MAISAMELSATASKINGARESPONSESAMSGAOUT : RECORD
     C+002+ASET+MSG+DEST+DATA:EE0D+002+ASET+MSG+DEST+DATA
     Decoderase Tembergameedata teeodeoo4easeTembernameedata
     DEGUSEASETEMSSESOUNCEEDATA:
     EEOD49024ASET4MSG4DEST4DATA:
     D41364TASKING4RESPUNSF4DATA:
____EEUC+138+TASKING+RESPONSE+DATA;
     C+139+TASK+CUF+TD+DATA:INTERER:
     L+141+TIME+PATA:RFAL;
     LEITI MEIREAL
     ENIC):
Meluentleetrackemessageemsgenutic
     -+14+HELS+TRACK+MESSAGE+MSG+OUT .1 RECORD.
     1+0^2+ASET+~SG+FEST+DATA:EEOD+002+ASET+MSG+DEST+DATA
   L+J04+ASEI+MSG+NAME+DATA:ELOD+OO4+ASET+MSG+NAME+DATA
     S+GG5+ASET+MSG+SQURCE+DATA:
     EED2+002+ASEI+HSG+DESI+DATA: ___
     .+135+SFNSOR+TL+DATA:FEOD+135+SENBOR+ID+DATA;
     T+132+TRACK+MESSAGE+DAT41ELOD+142+TRACK+MESSAGE+DATA
     EFITIME: PFAL
     FULL :
EECET+10+GRUUND+SHADOWING+CANDIDATE+TARGETS+ETIL
     FOFTELDERRUNDESHADE A INGECANDIDATE TARGETS ET
     1 + 149+ THO+HATA: POPLEAN
     F ! ) ;
                    E-18
```

1 1

EECLVT

EFOL HOS

EFTFan

FFVITST FFIF

: FILE (F FEFEF;

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VAX-11 P

DISKSUSE

```
EEDEPLST
               TARRAY (1. . EEMAXDEP) OF BOOLEANS
EFNOFLAGIRUGLEAN;
EFDIBUGIADOLEANI
  EFVALPAT : TEXT;
  EESUIF & TEXTS
 EESUIFERR : BOOLEAN;
  EEDEFSIANT, FEDEFEND: RUDLFAN;
 EFHECTYPE : INTEGER;
  (* FEGVPRFL : FILE OF INTEGER:
(***** CODE BLOCK
(* SETS VARIABLE DECLARATIONS FROM SOF
   STAT, 1863, POST : TEXT
  ISSPOSTINGTIVE : REAL
  :SS+MSG+SOUPLF : EFOD+002+ASET+MSG+DFST+DATA
               : EFOD+004+ASFT+MSG+NAME+DATA
: EFOD+002+ASFT+MSG+DEST+DATA
  1954MSG4NAME
  15S+MSG+OEST
(* REPUTHENTS DEPENDENT VARIABLE DECLARATIONS VOSE +)
        EFGDATE, FEGTIME, ERSIMIO, FEXDATE, EEXTIME, EERUNID: AASTRING!
        EF9VPF : PUPLFANT
     FERRIS
              : ARDAY [EE70SLST] OF FE7USTYP;
     EEFOUND
               I BOOLEAN!
     FEDVEREL
                : FILF OF INTEGER;
     Netwoethnenatainne Eaks
     C+142+TR4CK+FFSS4GE+PATA:EFOD+142+TR4CK+MESSAGE+DATA:
     Detainthe+DATG: REAL;
     P+13R+TASKING+RESPONSE+DATA:FEOD+138+TASKING+RESPONSE+DATA:
     D+127+RED+SEDSOR+TARGET+TO+UF+TNTEREST+DATA:FE7UNKNNNTYP:
     OF125+FEC+PEROFIFINFORMATIONATYPEARATA: EFFUNKNWNTYP:
     PA1254PERARRESTINATION ASENSORATIONATAL
     EEAU+125+REU+DESTIMATION+SENSOR+TD+DATA;
     Dense-croumbetarget-velocity-bata: REAL;
     PHOA7+GROUND+TARGET+LENGTH+DATA:PEAL:
     De046+GROUND+TAPGET+FREUUENCY+DATA:RFAL:
     N+157+SENSOR+PRIORTIY+DATA: INTEGER:
     Delise ser screinenata: EF orelises Proceinedata:
     ^+139+T49K+GHE+I^+NATA:IHTFGER;
     N+056+WEFDED+FFARIALE+DATA:LEON+056+WEFDED+FFASIALE+DATA:
     2+005+45FT+45G+5OURCF+PAT4:EEOP+1U2+45FT+MSG+DFST+PAT4;
     MAROUGH ASE THE SEALLANEAR ATALLEOPAROUGH ASE TAMBGANAME ADATAL
     O+002+45FT+45G+6F5T+DATA:FFUC+CQ2+45FT+M5G+0F5T+DATA;
     P+136+SEMSDR+MOLE+OF+UPERATION+DATA:
     EEDD+136+5F450P+40DE+UF+OPERATTOM+DATA:
     Denuaefregue: cyescaneparameterecata:peal:
     T+116+PLATFOPY+LOCATION+Z+DATAIREAL:
     **+115+PLATE JEM+LOCATTOM+Y+CATA:REAL:
     FATTHAFEATFUR - HENCSTION+ X+CATAIRFAL:
     DeligerLatformerodeZeDATA:REAL:
     FATIRAFLATFORMAN OF YARATAIREALI
     TATITAPLATEGRAMMONEX+DATAIREALI
     C+132+SECOMOARY+RUAD+Y+DATAIREAL;
     `+131+5ECO`OXXY+PQAD+X+9ATX:REAL;
     T +129+HIVE 9+1 OC+Y+DATA: HFAL:
     PHIZZHUIVEPHLUCHY+DATAIHFALI
     `+120+..ATL8040+L0C+Y+64TA:9EAL;
```

Source Listing

```
D+123+RATLROAD+LOC+X+DATA:REAL;
D+122+PRIMARY+POADS+Y+DATAIREAL:
D+121+PRIMARY+ROADS+X+DATAIRFAL:
P+024+ASP+VEL+Z+DATA:REAL;
De023+480+VFL+Y+DATAIRFAL;
D+027+ASP+VEL+X+DATA:REAL;
D+016+A5P+LUC+Z+DATA:RFAL;
D+015+45P+LUC+Y+DATAIREAL;
De014+4SP+LOC+X+DATAIRFAL;
Denio+asp+altitune+DatairE4L;
D+146+Y+WEATHER+LOC+DATA:REAL:
7+144+X+WEATHER+LOC+PATA:REAL;
P+129+PRECIPITATION+DATA:EF00+120+PRFCIPITATION+DATA;
SHORTH CHARLE AND TARREST OF THE SHORT AND THE SECTION OF THE SECT
9+037+CLOUP+COVER+PATA: EEOD+037+CLOUD+COVER+DATA;
D+180+MEI,S+EMITTER+TRAFFIC+TYPF+DATA:
EEOD+ORO+NFLS+EMTITER+TRAFFIC+TYPE+GATA;
C+179+NELS+EMITTEH+TTME+OF+LOCATION+DATA:REAL;
TE178ENELSEEDITTEREMODULATIONETYPEEDATA:
EEOD41814AFLS+EMITTER+MODULATION+TYPE+DATA:
D+177+NELS+EMITTER+CEP+DATAIREAL;
Det 76+ VEL SEEMITTER + BANDWIDTH+DATA: REAL :
C+170+SCRNARIO+GEN+IC+NUM+DATA: INTEGER;
P++69+PELS+EMITTER+Z+DATA:REAL+
P+169+ EI S+F* ITTFF+Y+DATA : REAL :
D+167+HELS+EHITTFH+X+D4TAIREAL;
Pelone del Seer Ittere Inerata: EEOne 175 e NEL SEEMITTERE INENATA:
F+074+16LS+EMITTER+FREQUENCY+DATA:PEAL;
D+070+NELS+EMITTFR+COV+CATA:REAL!
NOTITED ELSOTECHO POSCHATA: REAL;
THILDENELSHTDOINING HOATATREALS
DelogaTELSeTDOA+1+2+DATA:RFAL;
THOODENELSHOTHER SHOATA FREAL ;
DE059EVELSEDPE1E3EDATA:REAL;
DensaenELSephele2eDATAIRFAL;
THIUSHNEY SAPPEHBRIFFEDHSDIASTAPTAFPERHDATA: REAL;
E-105-ELS-PRE-ORIFFFR-SOT-MODILATTUM-TYPE-DATA:
EEDOW1814NFLSGEMITTER+MODULATION+TYPF+DATA;
P+10/14MELS+PRE+BOTFFED+SDI+FRER+PATA:RFAL;
T+103+VELS+PPE+6PIFFFD+SOI+END+FPE9+DATAIREALI
Deldiener Sempregriffede Anieupperentighte yedataireali
 ?+199+1E|S+PRE+H?IEFFD+API+UPPFR+RIGHT+X+DATA&REAL®
F+G+9++MELS+PHE+PPIFFFD+AMI+LMAFR+LFFT+Y+DATA:RFAL;
Decryoter Semographiffedeadielonfrelff texedatarral;
"+095+"ELS+PPE+RPIFFFD+ADI+FTLTEPING+CPITEPIA+DATA:
FEOD+095+4FLS+PHE+FHIEFEP+AUI+FILTERING+CRITERIA+DATA;
Congress Sefrenescaneupperefrenescanatairfal;
I +097+HELS+FRE"+SCANELOWEH+FREP+DATA:REAL;
P+165+5CFV4xIO+GEN+IO+VU"+DATA: INTEGER;
Delouenel Seemilified ContainedLy
1+103+1ELS+E"ITTF=+Y+DATAIPEALT
P+162+NELS+EMITTER+X+DATAIREAL;
Detadener Seen Ittere Inedata : EFODe075eNEL SeemIttere IDeDATA;
THE 158+ WELSHEM LISTON + STARTHTIME + DATA : REAL ;
D+157+DEL 3+EN [35TON+DURATION+DATAIREAL)
Denon-TEL SEETITTE LECEPEDATAIREALS
P+161+1EES+EMITTEH+TRANSMISSTON+FREUHENCY+DATATREALI
```

C+159+MET 3+EMITTER+FREQUENCY+HANDWIDTH+DATA:REAL:
Cagrante Servitterapour Rale VELADATAIREALI
NANTTA IEI SAFMITTERAMODILATIONATYPEADATA:
FEODELSIANFLSAFRITTERAMODULATIONATYPEADATA:
Datiscatescr.Marthass.Marthatintegers
FARRAMELSAE - ITTER+ZOUATAIREALT
MANBOARNELSHEMITTERAYADATARREAL;
Den85eAenELSeEMITTERexeDATA:REAL:
Dengaeaenelseemitterevelezedata:PEAL;
0+083+4+ELS+EMITTER+VEL+Y+DATA:PEAL:
Dend2eAFLEL3eFMITTFHeVFLexeDATA49EAL4
"+061+4+HELS+EMITTER+TRANSMISSIOM+FREQUENCY+DATAIREAL;
Den75eAenEl,SeE /ITTEREIDENATA:EFONE075eNELSEEMITTEREIDEDATA;
2+073+A+NELS+EMITIF 3+FREQUENCY+BANDHIDTH+DATAIREAL
"+0b4+4+VELS+EMISSION+STOP+TIMF+DATA:REAL;
Deco3+A+MELS+EMISSION+START+TIME+DATA:REAL;
Ue078eAeNELSeEMITIFRePONFRELFVFLeDATAIREALI
C+077+4+VELS+EMITTER+MODULATION+TYPE+DATA:
SECONISTANTES AND DULATION AT THE PARTY OF T
Den67enELSeEMITIENeHANDWIDTHeDATA:REAL:
De130eResCENARIOEGENEIDENUMEDATA: INTEGER!
OFCHTERENELSEEMITTEREZEDATA: PEAL;
De0866RANELSEE TITTERAYADATA: REAL!
"+095+"+ ELS+E-ITTFR+X+DATA: PEAL!
PAREMANEL SAEMITTERAVELAZADATA:REAL;
200836-141 SEE TITIFE VEL 4 YEDATA PEAL
CANGZANEL SAEN ITTERAVELAXADATA: PEAL;
Den61+Penelseemitter+TRAMSMISSION+FREQUENCY+DATA:REAL:
De075+9+NELS+EMITTER+ID+DATA:EF0D+075+NELS+EMITTER+ID+DATA:
Den73erenElseEMITTEReFREQUENCY+BANDHIDTHEDATA:REAL;
O+164+NELS+EMISSTON+STOP+TJME+DATA:RFAL:
2+063+RENELS+EMISSIGNESTART+TIME+DATAIREALI
0+153+NELS+EMITTER+CEP+DATA:REAL;
DATERANET SAEMITTERABANDWIDTHADATA: PEAL 9
DetaleNEL SeEMITIER + MODUL ATION + TYPE + DATA:
FEOD+191+NFLS+EMITTER+MODULATION+TYPE+DATA;
De175+MELS+EMITTER+Z+DATA:REAL;
0+174+NELS+E"ITTER+Y+DATA:REAL:
F+173+NELS+EMITTER+X+DATA;REAL;
P+172+MELS+EMITTER+TRANSMISSION+FREQUENCY+DATA:REAL:
C+171+NELS+EMITTER+ID+DATA:EEOD+075+NELS+EMITTER+ID+DATA:
"+080+JELS+E"ITTER+TPAFFIC+TYPE+DATA:
LEOD+ORO+FLS+ENTITER+THAFFIC+TYPE+DATA:
Ceo79eNELSeEMITTEReTIMEEOFELOCATIONEDATARFAL:
1+156+SCFNARIG+GFN+ID+NUM+DATA:INTEGER:
*+155+NELS+EMITTER+Z+DATA:REAL:
D+154+1ELSEEMITTER+Y+DATA:REAL:
T+153+NELS+EMITTER+X+DATA:REAL;
T+152+NELS+EMITTER+TPANSMISSTON+FREQUENCY+DATA&REAL&
De151eNELSEENLITEREIDEDATALEEODE075eNELSEEMITTEREIDEDATAL
D+150+VELS+EMITTFR+FREQUENCY+BANDWIDTH+DATA; REAL;
C+)49+NELS+EMISSION+START+TIME+DATAIREAL;
Gel 43eNEL SeEY ISSICHESIGNAL ESTRENGTHEDATARREALS
Detu7eNELSEENISSTONEDURATIONEDATA:REAL;
Peligoescenarioegeneidenumedata:integer:
*+087+\ELS+EMITTFR+Z+DATA:REAL;
CHORRY ELSHEMITTERHYPORTA: PEAL!
B 22

```
- Source Listing -----
                                            - 17-Mar-1983 17119139 --- DISKSUSE
 THOUSENELSHEMITTER+X+DATA:REAL:
 MADSTANELSAENITTERATEANSMISSIONAFREQUENCYADATATREALT....
 Dentremel seemittereinenata: EE onentsenel seemittereidedata;
 "+073+MELS+EMITTER+FREQUENCY+BANDWIDTH+DATA&REALS
 GARAGARESAER ISSTONASTARTATIMEADATAIPEALI
  +C62+MELS+EMISSION+SIGNAL+STRENGTH+PATA:REAL:
 "+ 161+ "ELS+E" ISSTON+NURATION+DATA: PEAL;
 DensaeranshallIngexenataireal;
 THOSE-HYPSOHI OCHYHPATA:REAL;
 Denserveschleenvaraterealt
 "+051+HVDSO+FLFV+CATA:REAL+
 THE APAGEDUNING TARGETHLOCHYEDATAIREAL;
 THRUSHIADOWNSHIARRETHE OCH YHDATA SREALS
 [+043+FLIGHT+WAYPOINT+Z+DATAIREAL;
 SHOUZEFLIGHTHADYDOINTHYHOATAIREAL;
 SHOUTHEUSCHIMMAYRUIHTMAADATAIPEALI
 "+145+Y+( OC+FEASTSLE+DATA: REAL!
 THE FARENCE OF FEASTH LADATES FEALS
 UF1A34RECOMDACTERSAREGAUPDATEADATA1
 EENT+133+SECOND+C-DRS+REQ+UPDATE+DATA;
  THIM OFFICETHE MERSHERHUPPATEHDATAL
 EFCDAUGOAFTHSTACHDRSARFDAUPDATEADATA;
 1+036+CITY+LCC+Y+DATA:PEAL;
 "+035+CITY+LUC+x+GATA:98AL;
 DEALGARTARTOALPRATERYADATAIREALI
  DECSSECADIO-UPDATEEX+DATAIREAL:
 THE OSPHEADT THURD ATE + 3+DATA : EECD+030+CARTO+UPDATE+1+DATA;
 Sealiacaricamenatealacatatecobasoacario-updatealacata;
  Tensoecaptoelpoateeleoata:EEODeo30+CARTO+UPDATEeleDATA;
 "+ )27+Car TC+SECTIO ++1884+DATA:INTEGER:
  alagratatage was salatatatage ala
  C+026+5RTUGE+LOC+x+DATA:REAL;
  ~ EFG784FALVO:6CCLEAN;
 FOUND : FUOL FANG
  +391+TELS+FFEQUENCY+SCAM+DATAIREAL:
  +1 28+047TO+ 148+8ECT+ + 10+04TA: TNTEGER:
  IMOSSWASPEYAU#CATA: REAL;
  +12140SD+Tj"F+DETA:PEEL;
 ~+110+180+901 L+041419E4E;
  SOFT REASPORTIGHOUATAINEAL;
 MANTA (SAME OF STINUE + )ATA : REAL;
 "+012+150+FATITUDE+DATA: TEAL;
 Senurelspeaccezenatairfal:
  PARAMESPARCEAYARATAIREAL;
  147 174 1574 1CC+ Y47 1TA: REAL;
 CLICKET I METAL AL F
 FETT IT IT IT ETEN
  TENIT 40 : ARGAY [EF7MESINDX] OF AASTRING:
    EF9197HFC : APHAY (FE7HESINDX) OF LE7CSLST;
DATA 44 AGENTIA RUSHOSSLE PROCESHRESZHEADERS POSE +)
 FU CTION EFHYPOCIOSISEF70SUST) : BOOLEAN; FORWARD;
 FROCE USER TERRISTATIVER DSIEETOSTYP); FORWARD;
 PROCEST HE FERROPOSHIVAR DS1:FETCRIVAR US2:EFTDSTYP):FORHAPD:
```

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17-Mer-1983 17:42:51

VAX-11 P

```
PROCEDURE : EEBDOSH (INPIEETINPTR) | FORWARD;
PROCEDURE EERINDS (VAR DS: EETDSTYP) FORWARD:
PROCEDURE FERUPDATE (DST: FORWARD;
FROCEDURE FERXIO(EEGINP: EETINPTR);
    HEGIN
    CASE FEGINET. INTYP OF
         FEINCIM:
         FEOF+01+RRIUGE+LOCATIONS+FILF:
              MEGIN
              EEGINPT. EEOF+01+89IDGE+LUCATIONS+FILE.
              B+826+BRINGE+LUC+Y+NATA I= D+026+BRINGE+LOC+X+DATA;
              EEGINPT. EEOF+01+dGIDGE+LOCATIONS+FILE.
              DED2748RIDGF+LOC+Y+DATA := D+0274BRIDGF+LOC+Y+DATA
              END:
         FEOF+OP+CARICHUPDATE+FILF:
              BEGIN
              EEGINPT. EEGF+02+CARTO+UPDATE+FILE.
              DEC29+CARTO+SECTION+NUM+DATA 1=
              D#029#CARTO#SECTION#NUM#DATA;
              KENTEPT. EFOF+02+CARTU+UPDATE+FILE.
              DEGSUECARTGEUPOATFELECATA 1#
              U+030+CARTO+UPDATE+1+DATA;
              EEGINGT EEUF+02+CARTU+UPDATE+FILE.
              D+031+CARTO+UPDATE+2+DATA IR
              Dec31+CAPTO+UPDATE+2+DATA;
              EF9TWP1.EF0F+02+C49TU+UPDATE+FILE.
              DEUBZERARTUEUPDATEEBENATA IS
              U+032+CARTO+UPDATF+3+DATA;
              EEGINPY.EEGF+02+CARTU+UPDATE+FILE.
              0+033+CARTO+UPDATE+X+DATA 1#
              D+033+CARTU+UPDATF+X+DATA;
              EF9THPT.EF0F+02+C49T0+UPDATE+FILE.
              U+034+CARTH+UPDATF+Y+PATA ##
              SEC34+CARTOFUPDATF+Y+DATA
              £ 401
         EERF+03+BITY+LOCATIONS+FILE:
              BELIN
              EFGINPT.EFOF+03+CTTY+LOCATIONS+FILE.
              DE035+CTTY+LUC+X+DATA IS U+035+CTTY+LOC+X+DATA1
              REGINPALEEUF+03+CITY+LOCATIONS+FILE.
              D+036+CTTY+LOC+Y+94TA ## D+036+CTTY+LOC+Y+DATA
              ENO:
         EELF+03+CMDRS+DATA+TC+UPDATE+FILE:
              MEGIN
              EF91WPT.EFOF+04+CMDPS+DAT4+TO+UPDATF+FILE.
              DECAUSE INSTECHORS SEREMEMBDATE STATE IR
              D+040+FIRST+CMURS+RFQ+UPDATE+DATA:
              EFGINPT. EFOF+04+CMDRS+DATA+TO+UPDATE+FILE.
              D+135+SECOND+CMPRS+RER+UPDATE+DATA :=
              D+133+SFCOND+CMORS+RER+UPDATE+DATA
              END:
         FEOF+05+FEASIBLE+ACTIVITY+AREA+FILF:
              KEGTN
```

VAX-11 F

DISKSUSE

D+055+NFLS+FMTSSION+START+TIME+DATA 1=

Source Listing

EFGIN

17-Mar-1983 17842851

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VAX-11 P

DISKSUSE

U+082+NELS+EMITTEP+VEL+X+DATA :=

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E-28

Source Listing

D+082+A+NELS+EMITTER+VEL+X+DATA 8# D+082+A+NELS+EMITTER+VEL+X+DATA; EF9INPT.EE0F+16+NFLS+EMITTER+FILE. D+033+A+NFLS+FMITTER+VEL+Y+DATA :8 U+OR3+4+NELS+EMITTEP+VEL+Y+DATAS EFGINPT.EFOF+16+NFLS+EMITTER+FILE. 0+094+A+NELS+ENTTTER+VEL+Z+DATA := D-034-A-NELS-EMITTER-VEL-Z-DATA; EF9INFT.EE0F+16+NFLS+EMITTER+FILE. C+035+A+NELS+EMITTER+X+DATA := U+045+A+NFLS+EMITTER+X+DATA; EEGINAT.EFOF+16+NFLS+EMITTER+FILE. CHURGHAHNELSHEMITTERHYHDATA ::= D+086+A+NELS+FMITTEP+Y+DATA; FEGINPT.EFOF+16+NFLS+EMITTER+FILE. CHORTHANNELSHEMITTERHITHER 1= D+037+A+NFLS+FMTTTEP+Z+DATA: EFAINPT. EFOF+16+NFLS+EMITTE9+FILE. S+130+4+SPENARIP+GEM+TO+NUM+DATA := HE130-A-SCENARIO-REN-TO-NUM-DATA EME: FEOFF174NELSALSTIMATEU+EMITTER+PARAMETERS+FILE: BEGIN 8F9]494. EFOF+17+NFLS+ESTIMATED+EMTTTEP+PARAMETERS+FILE. SHO77+HFLS4FMTTTER+ 100ULATION+TYPE+DATA := SEUTTE VELSEFMITTEPENCOULATIONETYPEEDATAS EF9THP+ EROF+174NELS+ESTIMATED+EMITTER+PARAMETERS+FILE. HENTHENFLSEEMITTEREPOWERFLEVELEDATA := DEDTREMELSER MITTER EPOWEREL EVEL EDATAS EFRILPI. E: OF+17+NELS+ESTI"ATED+FMITTER+PARAMETERS+FILE. 0+159+NELS+EMITTER+FREQUENCY+PANDWIDTH+DATA := U41594NFLS4FKITTER4FKFUHENCY4RANDWIDTH4DATAJ FEGS+17+NFLS+FSTI 'ATEN+FMITTER+PARAMETERS+FILE. N+161+NELS+FMITTER+THANSMISSION+FREQUENCY+DATA := C+161+NFLS+F4TTTER+TRANSMISSION+FREQUENCY+DATA FECF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE1 AFGT" EF91 VP1.EF0F+1H+NFLS+ESTIMATED+GROUND+TRUTH+FILF. HAUNDANELS+FRITTER+CEP+DATA 4= SHOREHITTERAPEPARATA; EFYTYP1.EF0F#18#NELS#FSTIMATED#GROUND#TRUTH#FTLE. S#157#NFLS#EMISSION#DURATION#DATA := HE157+HELS+EMISSION+DPRAITUN+DATA; EFGINFT.EFUF+18+MFLS+ESTIMATED+GROUND+TRUTH+FILE. HATSSANELSAEMISSIONASTARTATIMEADATA := D+198+NELS+EHTSSION+START+TTME+DATA; EFGINET.EEOF+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE. Delhochel SefmitteretueData := D+1404NFLS4FMTTTE9+TU+DATA; EFGINFI.EEOF61H6NFLS6ESTIMATED6GROUND6TRUTH6FILE. Delh2eNFLSeEHTTTEReyeDATA := C+1+2+ IF LS+ENTTTER+Y+NATA:

```
EEGINPT.EEOF+18+NELS+FSTIMATED+GROUND+TRUTH+FILE.
     D+163+NEL8+EMITTER+Y+DATA 1=
     D+163+NELS+FMITTER+Y+DATA;
     EEGINPT.EEOF+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE.
     U+164+NELS+FMITTER+Z+DATA :=
     D+164+NELS+EMITTER+Z+DATA;
     EEGINPT. EEUF+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE.
     C+165+SCENARIO+GEN+ID+NUM+DATA :=
     D+165+SCEMAPIN+GEM+TU+NUM+DATA
     END:
FROF + 19+NEL S+FREQUENCY+SCAN+FILE:
     HEGIN
     EF9INPT.EF0F+19+NELS+FRFQUENCY+SCAN+FILE.
     0-092-NFLS-FREG-SCAN-LOWER-FREQ-DATA ##
     U+092+NFLS+FREW+SCAN+LOWER+FREQ+DATA;
     EF91NP1.EF0F+19+NELS+FREQUENCY+SCAN+FILE.
     0+093+NELS+FREGASCAN+UPPER+FREG+DATA 13
     0+093+NFLS+FRFQ+SCAN+UPPER+FRFQ+DATA
     EMES
FEOF+20+HELS+PRE+BRIEFED+ADI+FILE:
     SEGIN
     EF9INPT. EEUF+20+NFLS+PRE+RRIEFED+ADI+FILE.
     U+095+NELS+PRE+BRIEFED+AUT+FILTERING+CRITERIA+DATA
     :=
     0+095+NELS+PRE+9RIEFED+AOI+FILTFRING+CRITERIA+DATA;
     EEGINPT.EEOF+20+NFLS+PRE+BRIEFED+ADI+FILE.
     D+097+AFLS+PRF+PRTEFED+ADT+1 OWEP+LEFT+X+DATA &=
     U+097+NFLS+PRE+PRIEFEP+ADI+LOWER+LEFT+X+DATA;
     EF9INPT.EF0F+20+NFLS+PRF+RRTEFED+A0I+FILE.
     U+098+NFLS+PRE+PRTEFED+AUI+LOWER+LEFT+Y+DATA 1=
     THUGHENELSHPREHARTEFENHAUTHLUMERHLEFTHYHDATA;
     EF9IMP1, EE0F+20+NFLS+PRE+BRIEFED+A0I+FILE.
     D+100+NELS+PRE+BRIEFED+AUI+UPPER+RIGHT+X+DATA :=
     U+100+NFLS+PRE+9RIEFED+ADI+UPPER+RIGHT+X+DATA:
     EFGINPT. EEOF+20+NFLS+PRF+BRILFED+401+FILE.
     D+101+NFLS+PRF+9RIEFED+ADI+UPPER+RIGHT+Y+DATA ##
     D+101+NELS+PRE+RRIEFED+ADI+UPPER+RIGHT+Y+DATA
     FADE
5EOF+21+NELS+PRE+UPIFFFD+SOI+FILE:
     MEGIN
     FEGINPT.EFOF+21+NELS+PRE+RRIEFED+SOI+FILE.
     L+103+NELS+PRE+BRIEFED+SUI+END+FREQ+DATA 18
     0+103+NFLS+PRF+FRIEFED+SUI+END+FRFQ+DATA;
     EEGINPT.EEGF+21+NELS+PRE+BRIEFED+801+FILE.
     N+104+RELS+PRE+BRIEFED+SOI+FREQ+DATA 1=
     C+104+NELS+PRE+RRTEFED+SOT+FREQ+DATA;
     LEGINPT. EEOF+21+NFLS+PRE+BRIEFED+SOI+FILE.
     D+105+15LS+PRE+BRIEFED+SOI+MODULATION+TYPE+DATA 1#
     C+105+NELS+PRE+PRTEFED+SOI+MODULATION+TYPE+PATAL
     EFYINPT.EEUF+21+NFLS+PRE+PRIEFED+SOI+FILE.
     U+106+NFLS+PRE+PRIEFED+SOI+START+FREQ+DATA :=
     U+106+NFLS+PRE+ARTEFED+SOI+START+FREQ+DATA
     £ "0:
FENF+24+1ELS+TOUA+DD+FTLF:
     EFGINPT.FFUF+24+NFLS+TDOA+DD+FILE.
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(+058+ FLS+DU+1+2+DATA IR D+058+NELS+DD+1+2+DATA)

EE9INP1.EE0F+24+NELS+TD0A+DD+FILE. D+059+NEL8+D0+1+3+DATA ## D+059+NEL8+D0+1+3+DATA# EF9INPT.EE0F+24+NFLS+TD0A+DD+FILE. D+060+NELS+DD+2+3+DATA 1= D+060+NELS+DD+2+3+DATA1 EE9INPt.EE0F+24+NELS+TD0A+DD+FILE. D+109+NFLS+TOCA+1+2+DATA IF D+109+NELS+TODA+1+2+DATA; EF9INPT.EE0F+24+NELS+TD0A+DD+FILE. D+110+NELS+TOOA+1+3+DATA := D+110+NELS+TDOA+1+3+DATA; EF9INP4 .EE0F+24+NFL5+TD0A+DD+FILE. U+111+NELS+TOGA+2+3+DATA := D+111+NFLS+TUDA+2+3+DATA ENU FEOF+25+NELS+TYPED+EMITTFR+REPORT+FILE: BEGIN EFGINPT, EEOF+25+NFLS+TYPED+EMTTTER+REPORT+FILE. D+070+NELS+FMITTER+CUV+DATA 1= D+070+NELS+EMITTER+COV+DATA: EFGINET.EEOF+25+NELS+TYPED+EMTTTER+REPORT+FILE. D+074+NFLS+EMITTER+FREQUENCY+DATA := U+074+NFLS+EMITTER+FREQUENCY+DATA; EEGINPT.EEOF+25+AFLS+TYPED+EMITTER+REPORT+FILE. De1664NELS+EMTITER+TD+DATA 12 D+166+NELS+EMITTER+ID+DATA; ERGINPT. EFOF+25+NFLS+TYPED+EMITTER+REPORT+FILE. D+167+NELS+EMITTER+X+DATA 1= D+167+NELS+EMITTER+X+DATA; EFGIURT-FEOF+25+NFLS+TYPED+FMITTER+REPORT+FILE. 0+168+NELS+EMITTEP+Y+DATA 1# U+168+NFLS+EMITTER+Y+DATA; EFGINET. EFOF +25+NFLS+TYPED+EMITTER+REPORT+FILE. D+169+NELS+EMITTER+7+DATA IR 0+169+NELS+FMITTER+Z+PATAI EFGINPT-EFOF-25-NELS-TYPED-EMITTER-REPORT-FILE. C+170+SCENARIO+GEN+TD+HUM+DATA 18 L+170+SCEMARIO+GEM+TE+NUM+DATA; EFGINET. EFOF #25 #NELS #TYPED #FMITTER #REPORT #FILE. D+1764NELS+FMITTER+RANDWIDTH+DATA 12 E+176+NFLS+EMITTER+BANDWINTH+DATAL ERGINET. EEOF+25+NELS+TYPED+EMITTER+REPORT+FILE. D+177+NELS+EHITTER+CEP+DATA 1= D+177+hELS+EMITTER+CEP+DATA1 EEGINPT. LEOF+25+NFLS+TYPLD+EMITTER+REPORT+FILE. D+178+NELS+EMITTER+MODULATION+TYPE+DATA := D+178+NELS+EMITTEP+MODULATION+TYPE+DATA: BEGINDI, EEUF+254NELS+TYPED+EMITTER+REPORT+FILE, U+179+NELS+FMTTTER+TIME+OF+LOCATION+DATA := NAT794NELS4FMITTEP+TIME+UF+LOCATION+DATA; EF41NP1_EF0F+25+NFLS+TYPED+EMITTER+REPORT+FILE. P+180+NELS+EMITTER+TRAFFIC+TYPE+DATA 18 D-18G+NELS+FMITTER+TRAFFIC+TYPE+DATA **គ្គី MD ៖** ELCF+26+NELS+#EATHER+CONDITIONS+FILE:

> LEGINPT.EEOF+26+NFLS+NEATHER+CONDITIONS+FILE. N+U37+CLOUD+COVFR+DATA IN D+037+CLOUD+COVER+DATA;

```
17-Mar-1983 17:42:51
                                                        VAX-11 P
                                 17-Mer-1983 17:19:39 ---- DISKSUSE
... Source | leting ..
      EFGINPT.EFOF+26+NFLS+WEATHER+CONDITIONS+FILE.
   - De039eELEVATION-HEATHER-DATA 18
      T+039+ELEVATION+WEATHFR+DATA;
      EE9INPT, EE0F+26+NFLS+WEATHER+CONDITIONS+FILE.
     ...D+120+MRECIPITATION+DATA ##
      D+120+PRECIPITATION+DATA;
      EF91NPT.EF0F+26+NFLS+WEATHER+CONDITIONS+FILE.
 Delu4exemEATHEReLOCEDATA 48
      D+144+X+WEATHER+LOC+DATA;
      EF91NP1, EF0F+26+NFLS+WEATHER+CONDITIONS+FILE.
      HAT HERAL DCADATA 18.
      D+146+Y+WFATHER+LOC+DATA
      F 100 :
FEOFA274PLATFURMACONTROL4FILE1
      BEGIN
      EF9INPT.EF0F+27+PLATFORM+CONTROL+FILE.
     EF91NPT.EE0F+27+PLATFORM+CONTROL+FILE.
      E+014+ASP+LOC+X+DATA := D+014+ASP+LOC+X+DATA;
   EEGIART EEGF+27+PLATECRM+CONTROL+FILE.
      D+C15+ASP+LOC+Y+DATA := D+O15+ASP+LOC+Y+DATA;
      EF9INPT.EF0F+27+PLATFORM+CONTROL+FILE.
    De016+ASP+LCC+Z+DATA 1= D+016+ASP+LCC+Z+DATA;
      EE9INPT.EE0F+27+PLATFORM+CONTROL+FILE.
      D+022+ASP+VEL+X+DATA := D+022+ASP+VEL+X+DATA;
     EEGINPT LEOF+274PLATEORM+CONTROL+FILE.
      D+023+ASP+VEL+Y+DATA := D+023+ASP+VEL+Y+DATA;
      EFGINPT.EFOF+27+PLATFORM+CONTROL+FILE.
      De024+ASP+VEL+Z+DATA : # D+024+ASP+VEL+Z+DATA
      EUD:
 FEOF+29+PRIMARY+ROAD5+FILE:
     BEGIN
      EF9TNPT. EF0F+28+PRIMARY+ROADS+FILE.
      D+121+PRIMARY+ROADS+X+DATA IM
      D+121+PRIMARY+ROADS+X+DATA:
      EFRINPT. EEOF+28+PRIMARY+ROADS+FILE.
      C+122+PPIMAPY+ROADS+Y+DATA :#
      C+122+PRIMARY+ROADS+Y+DATA
      END:
 EEOF+29+PAILPUAD+LOCATIONS+FILE:
    BEGIN
      EFGINPT.EFOF+29+RAILRDAD+LOCATIONS+FILE.
      D+123+RAILROAD+LOC+X+DATA :=
      D+123+RAILROAD+LOC+Y+DATA:
      EE9INP1.EE0F+29+RAILROAD+LOCATIONS+FILE.
      U+124+RAILROAD+LOC+Y+DATA :=
      D+124+RAILRCAD+LOC+Y+DATA
 FEGF+30+RIVEP+LOCATIONS+FILE:
     PEGIN
      EE91NPT.EE0F+30+RIVER+LOCATIONS+FILE.
      D+128+RIVER+LOC+x+DATA := D+128+RIVER+LOC+x+DATA;
      FEGINPA . EEOF+30+RIVER+LOCATIONS+FILE.
      D+129+HIVER+LOC+Y+DATA := D+129+RIVER+LOC+Y+DATA
      E 1.0 1
 FEOF+31+SECONDARY+RUADS+FILE:
      HEGIN
```

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17-Mar-1983 17:42:51
                                                     VAX-11 P
                              17-Mar-1983-17119139 -- DISKBUSE
 Source Listing
     REGINPT.EEOF+31+SECONDARY+ROADS+FILE.
    C+151+SECONDARY+ROAD+X+DATA 1* ...
    D+131+SECONDARY+ROAD+X+DATA;
    EE9INFT.EE0F+31+SFCONDARY+ROADS+FILE.
     De132+8FCONDARY+ROAD+Y+DATA +-
    D+132+SECONDARY+ROAD+Y+DATA
    END:
FEOF+32+SENSOR+ORBIT+MODS+FILE:
    BEGIN
    EF91NP1.EE0F+32+SENSOR+ORRIT+MODS+FILE.
 U+117+PLATEORY+MOD+X+DATA;
    EFYINPT.EEOF+32+SENSOR+ORRIT+MODS+FILE.
    D41484PLATFORM4MOD4Y4DATA 4=
    D+118+PLATFORM+MOD+Y+DATA;
    EE91\P+.EF0F+32+SENSCP+ORBIT+MODS+FILE.
   DE1194PLATFORMAMODEZEDATA
    EMU;
BEGIN
     EF9INPT.EF0F+33+SENSOR+PLATFORM+LOCATION+FILE.
   S+114+PLATFORM+LOCATION+X+DATA;
    FEGINPT.EEOF+33+SFNSOF+PLATFORM+LOCATION+FILE.
    -U+115+PLATFORM+LUCATION+Y+DATA 18:
     D+115+PLATFORM+LOCATION+Y+DATA;
     EF91NPT.EE0F+33+SENSOR+PLATFORM+LOCATION+FILE.
    HATTORMAL OCATIONAZADATA ##
     D+116+PHATFORM+LOCATION+Z+DATA
    £131/2
FEDE+34+SEUSOR+STATUS+FILE:
    FEGIN
    EF9INPT.EF0F+34+SFNSUP+STATUS+FILE.
    CAQUAAFREGUFNÇYASCANARARAMETERADATA (# ....
    CARRACTER COUR NOYASCAMAPAPAMETERADATA:
    FEGINET.EROF+34+SENSOR+STATUS+FILE.
->+136+SENSOR+MODE+OF+OPERATION+DATA +=-
    D+136+SE//SOFFHODE+OFFDPERATION+DATA
    E"0:
MACIAFSAMELSAUMITAANDAFNVIRONMENTADATAAMSGAINI
    PETV
     EFGTOPT.
  . . MAGIAFSAMFLSAUMITAANDAENVIRONMENTADATAAMSGAIN.
    U+002+ASET+MSG+DEST+DATA :=
    0+072+ASET+MSG+DEST+DATA;
    FEBINP1.
     W+C1+F5+ FELS+H-STT+AMD+ENVIRONMENT+DATA+MSG+IN.
    LACCHARETAMSCAMAMEADATA IF
   . LAUGHARETAMSGAMAMEADATA;
    EFGINOT.
     ++01+FS+NELS+UNTT+AMD+ENVIRONMENT+DATA+MSG+IN.
    GAONSHASETHMSGASOURCEADATA :=
     NEONSEASETEMSRESO IRPLEODATAL
    FF91127.
     SECTERS OF FLEE BUTTE AND SENVIRONMENT DATA MESSEIN.
    EF171"E := EF171 'E
E-33
```

```
E 4:01
MADZANELSACARTOAUPDATESAMSGAINE
     HEGIN
     EF9INPT.M+02+NELS+CARTO+UPDATES+M8G+IN.
     D+002+ASET+MSG+DEST+DATA 18
     C+UM2+ASET+MSG+PEST+DATA;
     EF9INFT. M+02+NELS+CARTO+UPDATES+MSG+IN.
     U+004+ASET+MSG+MAME+DATA :=
     DEGOGGEASETEMSGEMAMEEDATA:
     EFGINPT. M+U2+NELS+CARTO+UPDATES+MSG+IN.
     U+005+ASET+MSG+SQURGE+DATA #=
     D+005+ASET+"SG+SDURCE+DATA;
     EFYINFI. MED24NELS+CARTU+UPD4TFS+MSG+IN.EE1TIME :=
     EF1TIME
     End;
MANSARELSACOMMANDERSAREWUIREMENTSAMSGAIN:
     SFGIN
     EFGINPT. M+03+NELS+COMMANDERS+PEDUIREMENTS+MSG+IN.
     D+002+ASET+MSG+DEST+DATA IS
     DegazeASET#MSG#DEST#DATA;
     EFGINPT.M+03+NELS+COMMANUERS+REDUIREMENTS+MSG+IN.
     DEDUGERASETENSBENAMEFOATA IS
     DeGC4+ASET+MSG+NAME+DATA;
     EFATART. *+03+NELS+CORMANDERS+PERUIRFMENTS+MSG+IN.
     DADOS+ASET+MSG+SD IRCE+DATA #=
     U+005+ASET+1 SG+SOURCE+DATA;
     EF91491. #4034NELS+COMMANDERS+PERDIREMENTS+MSG+IN.
     EETTIME I= EFTTIME
     ENL;
THEGHERE SHILL IF IF DETASKEDSGETH:
     FOLL
     EFYINET. F+04+MELS+MODIFTED+TASK+MSG+IN.
     DEGOSEASETERSGEDESTEDATA IF
     1-4002+ASET+MSG+DERT+DATA;
     EFGINP1. NOU4-NELSOMOUTFTED-TASK+MSG-IN.
     E-GOULASET+ SSG+MAME+DATA :=
     114 ) THE ARE THYSGOTA TENESTAS
     ESGITPT. M+04+NELS+MODIFIED+TASK+MSG+IN.
     0+095+ASET+MSG+SOURCE+DATA IR
     P+005+ASET+MSG+SUURCE+DATA;
     EFGINFT. M+U4+NELS+MODIFIED+TASK+MSG+IN.
     MAGGGAREDENAFEASTBLEADATA :=
     : +US6+NFF3EP+FE4STBLE+LATA;
     ERBINET. MED4+MELSEMOLIFIED+TASKEMSGEIN.
JE139+TASKEGUE+TD+DATA := D+139+TASKEGUE+ID+DATA;
     EFFINEL . M+04+MELS+MODIFIED+TASK+MSG+IN. FEITIME IN
     EFITIME
     E 116.1
MARKARESARKRITAMUNIFICATIONSAMSGAIN:
     FEGINET. NEOSENEL SEORBITEMOUTFICATIONSEMSGEIN.
     D+002+ARET+MSG+DERT+DATA 18
     L+GOZ+ASET+MSG+DEST+DATA;
     RESTORT. MEDICENCUSE OPETTE HOUTETCATIONS + MSGOIN.
     DEDOGRAMASE THUSCH LAME HOATA IN
     SHOR4+ASET+"SG+"A"E+LATA;
     SEGINAT. MARKAMEL SACABITAMOUTETCATIONSAMSGAIN.
```

```
D+005+ASET+MSG+SQURCE+DATA ##
    D+JOS+ASET+MSG+SOURCE+DATA;
    EF9INP+.M+06+NELS+OPHIT+MODIFICATIONS+MSG+IN.
     D+135+SENSOR+ID+DATA := D+135+SENSOR+ID+DATA;
    EF9THPT.M+06+NELS+OPRIT+MODIFICATIONS+M8G+IN.EE1TIME
     := EE1TTME
     END:
M+OH+HELS+PHIORITIZED+SENSOH+DIRECTIONS+M8G+IN:
    BFGIN
    EF9INPT.
     M+08+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
    U+002+ASET+MSG+DEST+DATA :=
     U+002+ASET+MSG+DEST+DATA;
    EESTNPT.
     ##OS+MELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
     D+004+ASET+MSG+NAME+DATA 1=
    D+004+ASET+KSG+NAME+DATAI
    FFGTNP1.
     14G8+MELS+PRIORITIZED+SENSUR+DIRECTIONS+MSG+IN.
     G+U05+ASET+MSG+SOUNCE+DATA 1=
     D+005+ASET+MSG+SUINCE+DATA;
     EFGINET.
     ALORDNELSCPRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
     DANSOANEEDEDAFEASTBLEADATA 1=
     D+056+NEEDED+FEASTHLE+DATA;
     MADRAMELSAPPIORITIZEDASENSURADIRECTIONSAMSGAIN.
     0+135+SEMSUR+TO+DATA IS D+135+SENSOR+ID+DATA1
     FFGINDT.
     HACPAHELSAPRIORITIZEDASENSORADIRECTIONSAMSGAIN.
     U+137+SFNSUH+PRIORITY+DATA :=
     U41374SENSOR+PRIORITY+UATA;
     EFGINDT.
     MAGRAMELSAPPIDRITTZFU+SENSOR+DIRECTIONS+MSGAIN.
     EFITIME := EFITIME
     EUD:
AFGT4
     EF91N21.M+09+MELS+REQUESTED+SENSOR+DATA+MSG+IN.
     D+002+ASET+MSG+DEST+UATA 1#
     De002+ASET+MSG+DEST+DATA;
     EF9INDT. #4094MELS4RFOMERTF04SENSOR+DATA+MSG4IN.
     DEGRAFASE THYSIGHNAME +DATA IF
     Denna+ASET+MSG+NAME+DATA;
     EEGINFT. M+09+NELS+RFUUESTFD+SFNSOR+DATA+MSG+IN.
     D+005+ASET+MSG+SUURCE+DATA :=
     U+005+ASET+NSG+SQURGE+DATA;
     EF 91%P1.M+09+MELS+RFQUESTFD+SENSOR+DATA+MSG+IN.
     DAU45+GPS+ID+DATA := D+045+GPS+ID+DATA;
    ERGINFT, MODRONEL SONFWUESTED - SENSOR - DATA - MSG - IN.
     EFITINE := EFITIME
     EVO;
Me15+Teamu+CeSTOP+NELSHASG+IN:
     PFGIN
     EF9TNPT.M+15+T+AND+C+STOP+NELS+MSG+IN.
     HI-002+ASET+MSG+DEST+DATA 12
     E-002+45ET+MSC+DEST+UATA:
```

i. 4

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EFGINPT.M+15+T+4ND+C+STOP+NELS+MSG+IN.
    D+G04+ASET+MSG+NAME+DATA 4=
     D+004+ASET+MSG+NAME+DATA;
     EEGINPT. M+15+T+AND+C+STOP+NELS+MSG+IN.
     D+005+ASET+MSG+ROURCE+DATA 1=
     U+005+ASET+MSG+SUIRCE+DATA;
     EF9INPT.M+15+T+AND+C+STGP+NELS+MSG+IN.EE1TIME :=
     EFITIME
     END;
M+05+NFLS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT:
     RECIN
     EFGINPT.
     MADSAMELSANONASHRVETLLANCEATAPGETAREPORTSAMSGADUT.
    U+002+ASET+MSG+DEST+UATA :=
    D+002+ASET+MSG+DEST+DATA;
     EEGINPT.
     MEDSENELSENDAESURVETLLANCESTARGETEREPORTSEMSGEOUT.
     U+004+ASET+MSG+MA 4E+DATA 1=
     0+004+ASET+MSG+MAME+DATA;
    EESINPI.
     N+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT.
     U+005+ASET+MSG+SQURCE+GATA :=
     D#005#ASET#MSG#SOURCE#DATA;
     M+05+MELS+MON+SURVETLLAMCE+TAPGFT+REPORTS+MSG+QUT.
     De045+GPS+ID+DATA := De045+GPS+ID+DATA;
     EEGINPT.
     M+05+MELS+MON+SURVEILLANCE+TARGFT+REPORTS+MSG+OUT.
     D#046+GROUND+TAPGET+FREQUENCY+DATA 12
     D+046+GROUND+TAPGET+FREQUENCY+DATA;
     EE91591.
     M+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+M3G+OUT_
     D+G47+GROUND+TAPGFT+LENGTH+DATA 1=
     D+047+GROUND+TAPGET+LENGTH+DATA;
     EFGINPT.
     heusenelsehonesopveillanceetargfterfportsemsgeout.
     0+050+GROUND+TARGET+VFLOCITY+DATA :=
     De050+GROUNC+TAPGET+VELOCITY+DATA;
     EESTHPT.
     M+05+MELS+MON+SURVEILLAMCE+TARGET+REPORTS+MSG+OUT.
     EESTIME := EESTIME
     ENDS
M+07+NFLS+PLATFUPM+LOCATION+REPORTS+MSG+QUT:
     BEGIN
     EF9INPT.M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     D+OP2+ASET+MSG+DEST+DATA 1#
     D#002+ASET+MSG+DEST+DATA:
     EEGTUPT.M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     D-004+ASET+1 SG+MAME+DATA 1=
 ...... U+004+ASET+YSG+NAME+LATA; ....
     EF9INP1.M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+QUT.
     D+005+ASET+M5G+SOURCE+DATA 1#
     D+005+ASET+MSG+SOURCE+DATA;
     EFGINPT.M+U7+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT.
     FFITIME := EEITIME
     E 401
Me10+NELS+SEMSOR+REQUESTS+MSR+OUT:
```

```
17-Mar-1983 17:19:39 DISKSUSE
 Source Listing-
     LEGINP1.
  0+046+GROUND+TARGET+FREQUENCY+DATA 1=
     D+046+GROUND+TAPGET+FREQUENCY+DATA;
    -ffdInbt ...
     M+12+NELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT.
     L+047+GROTHO+TARGET+LENGTH+DATA :=
  ---- C+047+GROUND+TARGET+LENGTH+DATA;
     *+12+NELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT.
   ... DADSOAGROUNDATARGETAVELOCITYADATA ....
     C+USO+GROUND+TAPGET+VELOCITY+DATA;
     EFGINPT.
    Melaenelsesurveillanceetargetereportsensceout
     EETTIME := EETTIME
     END:
-M+13+NFLS+TASKING+RESPONSES+MSG+OUT:
     BEGIN
     EEGINPT. M+13+NELS+TASKING+RESPONSES+M8G+OUT.
     U+GOZ4ASET4MSG4DEST4CATA 18
     D+002+ASET+MSG+DEST+DATA;
     EF9INP1.M+13+NELS+TASKING+RESPONSES+MSG+OUT.
  Degn4+ASET+MSG+NAME+DATA;
     EE91AP1.M+13+NELS+TASKING+RESPONSES+MSG+OUT.
     D+005+ASET+MSG+SOUNCE+DATA IE
     D+005+ASET+MSG+SOURCE+DATA;
     EEGINPT. M+13+NELS+TASKING+RESPONSES+MSG+OUT.
  C+138+TASKING+RESPONSE+DATA :=
     U+138+TASKING+RESPONSE+DATA;
     EE9INP1.M+13+NELS+TASKING+RESPONSES+MSG+OUT.
D+139+TASK+GUE+ID+DATA := D+139+TASK+QUE+ID+DATA;
     EE91NPT.M+13+NELS+TASKING+RESPONSES+MSG+OUT.
     D+141+TIME+DATA := D+141+TIME+DATA:
  EEGINPT.Me13+NELS+TASKING+RESPONSES+MSG+QUT.EETTIME
      := FE1TJMF
     END:
Melwenelsetrackemessageemsgeout:
     MEGIN
     EF91NP+.M+14+NELS+TRACK+MESSAGE+MSG+OUT.
     De002eASETeMSGeDESTeDATA :=
     D+G02+ASET+MSG+DEST+DATA;
     EEGINPT. M+14+NELS+TPACK+MESSAGE+MSG+OUT.
 C+004+ASET+MSG+NAME+UATA IR
     C+004+ASET+MSG+NAME+DATA;
     EF9INP1.M+14+NELS+TPACK+MESSAGE+MSG+OUT.
   De005+ASET+MSG+SQURCE+DATA :=
     L+U05+ASET+MSG+SOURCE+DATA;
     EF91-F1.M+14+NELS+TPACK+MESSAGE+MSG+OUT.
   Del35+SENSOR+ID+DATA :# D+135+SENSOR+ID+DATA:
     ERGINPT.M+14+NELS+TPACK+MESSAGE+M8G+OUT.
     C+142+TPACK+MESSAGE+DATA 18
     Le142+TRACK+MESSAGE+DATA:
     FEGINAL WELSTRACK + MESSAGE + MSG+OUT . EETTIME :
     EFITIME
     END:
 FERETARCHGROUND-SHADOWING-CAMDIDATE-TARGETS-ET:
```

17-Mar-1983 17:42:51

VAX-11 P

```
17-Mer-1983 17:42:51
  Source Listing
                                   17-Mer-1983 17:19:39
      BEGIN
      EESTNPT.
      EEOFT+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET.
      D+140+TRD+DATA := D+140+TBD+DATA
      ENDT
 FENET+5+HELS+PPE+6RIFFFD+SOI+ET:
      REGIN
      EEGINPT.EFOET+5+NELS+PRE+BHIEFED+80I+ET.
      D+140+TBD+DATA := D+140+TBD+DATA
      END!
 FEGET+A+NELS+PRE+BRIFFFD+ADI+ET&
      BEGIN
      EFGINPT.EEGET+8+NFLS+PRF+HRIEFED+AGI+ET.
      D-140+THD-DATA := N-140+TBD-DATA
      END:
FERET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET:
      BEGIN
      EEGINPT.EEGET+9+STGNAL+NOISE+CANDIDATE+TARGETS+ET.
      D+140+TRD+DATA := D+140+THP+DATA
      END:
FEOET+2+NELS+EMITTER+GROUND+TRUTH+FT:
      HEGIN
      EF9TNP1,FF0FT+2+NFLS+FMITTER+GROUND+TRUTH+ET.
     DELAUSTED STATE TO THE TENTE TATA
      t *119
FERETATABLESANFATHERALTS
     PEGIN
     EESTINT. EFOFT+7+NELS+WEATHER+FT. D+140+T9D+DATA :=
     C+140+IRD+DATA
     : 311.3
FERET+3+ YELS+FLIGHT+ET:
     DEGIN
     EESINET.EEGET+3+NFLS+FLTGHT+ET.D+140+T8D+DATA :=
     D+140+TPD+OATA
     FROM
FERET+#+NELS+PREGUENCY+SCAN+ET:
     BEGIN
     EFGINPT. EFUET-44NFLS+FRFWUENCY+SCAN4ET.
     L+149+TPD+DATA IN D+140+TBD+DATA
     ENU:
FERET+1+NELS+EMISSION+THREAT+ET:
     EFGTHPT.EFUFT+1+NELS+FMISSION+THRFAT+ET.
     Del40eTBDeDATA := Del40eTBDeDATA
     10.3
FEGET+6+NELS+VFHTCLE+CHARACTERISTICS+ET:
     OFGIN
     EF9InP1.EF0FT+6+NFLS+VEHICLF+CHARACTERISTICS+ET.
     SHIPOFIRDEDATA := PA140ATBDADATA
     LNLI
FECET+11+DFTECTED+EMISSIONS+DD+TD04+ET:
     BEGIN
     FND;
FEARTH12+UFFFCTEN+FMTSSIANS+COARSE+ET:
     CEGIN
     E 1.13 1
FFCET+13+UFTECTED+E41881ANS+FINE+ET:
```

VAX-11 P

DISKSUSE

1

BEGIN END END END (* EE8XIO *); PHOCEDURE FERXII(EEYINPIEE7INPTR); BEGIN CASE FEGINPY, INTYP OF FEINDIN: FENF+01+BRIDGE+LOCATIONS+FILE: REGIN D+026+0RIDGE+LOC+X+DATA1=EE9INP+. EEOF+01+BRIDGE+LOCATIONS+FILE. D+026+BRIDGE+LOC+X+DATA; 0+027+8RINGE+LOC+Y+DATA:=EE9INPt. EEOF+01+BRIDGE+LOCATIONS+FILE. D+027+BRIDGE+LUC+Y+DATA END: FEOF+02+CARTO+UPDATE+FILE: BEGIN D+029+CARTO+SECTION+NUM+DATA: #EF9INPT. EEOF+02+CARTO+UPDATE+FILE. U+029+CARTO+SECTION+NUM+DATA; C+030+CARTO+UPDATE+1+DATA ##FE9INP+. EFOF+02+CARTU+UPDATE+FILE,D+030+CARTO+UPDATE+1+DATA; G+031+CARTO+UPDATE+2+DATA1=EE9INPT. EFOF+02+CARTU+UPDATE+FILE,D+031+CARTO+UPDATE+2+DATA; D+032+CARTO+UPDATE+3+DATA: #EE91NP+. EEOF+02+CARTO+UPDATE+FILE.D+032+CARTO+UPDATE+3+DATA: C+033+CARTO+UPDATF+X+DATAIREEQINPT. FFUF+02+CARTU+UPDATF+FILE.D+033+CARTO+UPDATE+X+DATA1 G-034-CARTO-UPDATE-Y-DATALEEGINPT. EEOF+02+CARTU+UPDATF+FILE.U+034+CARTO+UPDATE+Y+DATA ENDI FEOF+03+CITY+LOCATIONS+FILE: eFGTN D+035+CITY+LOC+Y+PATA1=FE9INP+. EFOF+03+CITY+LUCATIONS+FILE.D+035+CITY+LQC+X+DATA; F+036+CTTY+UOC+Y+DATA:=FE9IDPt. LEUF+03+CITY+LUCATIONS+FILE.D+036+CITY+LQC+Y+DATA £ 114 \$ FEOF+94+F"ORS+DATA+TOHUPDATE+FILE: · 1616 LecadeFinstecMorseRedeupdatEedata: #EEGINP+. EEOF+04+UMDFS+DAT4+TO+UPUATE+FILE. C+040+FIRST+CHOMS+RFU+UPDATF+MATA; D+133+SECONE+CMORS+REQ+UPDATE+DATA; = EE9INPt. EFOF+14+CHORS+UATA+TO+UPDATF+FILE. U+133+SECOND+CMORS+REQ+UPDATE+DATA END: FEOF+05+FEASIALE+ACTIVITY+ARFA+FILF1 MEGIN De143+x+LDC+FEASIBLE+DATA:#EE9INPT. EFOF+05+FFASIALF+4CTIVITY+AREA+FILE. N+143+X+LOC+FFASIPLF+DATA;

U+145+Y+LNC+FFARINLF+NATAIRFE9INPT. EF@F+N5+FFARINLF+NCTIVITY+AREA+FILE. - Source Listing

D+145+Y+LCC+FFASIBLE+DATA ENDT EEOF+06+FLIGHT+PROFILE+FILE: BEGIN D+041+FLIGHT+WAYPOINT+X+DATA : #EE91NP+; EFOF+06+FLIGHT+PROFILE+FILE. C+041+FLIGHT+WAYPDINT+X+DATA; D+042+FLIGHT+WAYPOINT+Y+DATA: EEGINP+. EEOF+06+FLIGHT+PROFILE+FILE. C+0/2+FLIGHT+WAYPOINT+Y+DATA; D+043+FLIGHT+WAYPOINT+Z+DATA1=EE9INP+. EFGF+06+FLIGHT+PROFTLE+FILE. D+043+FLIGHT+WAYPOINT+Z+DATA ENDI FEOF+07+GROUP+TARGET+LOCS+FILE: BEGIN D+048+GROUND+TARGET+LOC+X+DATAIEEE9INP+, EFOF+07+GROUP+TARGET+LOCS+FILF. D+048+GROUND+TARGET+LOC+X+DATA; D+049+GROUND+TARGET+LOC+Y+DATAIMEE9INPT. EEOF+07+GROUP+TARGET+LOCS+FILE. D+049+GROUND+TARGET+LOC+Y+DATA END : EERF+08+HYPSO+DATA+FILE: BEGIN 0+051+HYPSO+ELEV+DATA:=FE9INPt. EEOF+OR+HYPSO+DATA+FILE.D+051+HYPSO+ELEV+DATA; D+U52+HYPSO+LOC+X+DATA:=EE9INPT. EFOF+08+HYPSO+DATA+FILE.D+052+HYPSO+LOC+X+DATA; C+US3+HYPSC+LOC+Y+DATA: #EE9INPT. EFOF+ON+HYPSO+DATA+FILE.D+053+HYPSO+LOC+Y+DATA END: FEOF+09+MARSHALLING+AREAS+FILE: BEGIN D+054+MARSHALLING+X+DATA: #EE9INPt. EEOF+09+MARSHALLING+APEAS+FILE. D+054+MARSHALLING+X+DATA; D-055-MARSHALLING+Y-DATAIREFRINPT. EFOF+09+MARSHALLING+AREAS+FILE. 0+055+MARSHALLING+Y+DATA END; FEOF+10+HELS+CANDIDATE+TARGETS+FTLE: MEGIN U=051=NFLS=FMISSIDN=DURATION=DATA: =EEQINPT. EFOF+10+NELS+CAMOTDATE+TARGETS+FILE. C+O61+NELS+EMISSION+UUKATION+DATA; BARANFLSAEMISSIONASIGNALASTRENGTHADATA: ZEERINPA. EFOF+10+NFLS+CAMDIDATF+TARGETS+FILE. D+062+HELS+F4ISSION+SIGNAL+STRENGTH+DATA: GAOGSANELSAEMISSIONASTARTATIMEADATA: EERINP! EECF+10+NFLS+CANDIDATE+TARGETS+FILE. U+063+NELS+EMISSION+START+TIME+DATA; 04073+NELS+FMITTER+FREQUENCY+BANDWIDTH+DATA : #EE91APT. EEUF+10+NFLS+CANDIDATE+TARGETS+FILE. U+073+NELS+EMTTTES+FREQUENCY+RANUWIDTH+DATA; 0+075+NELS+FMITTER+IL+DATA:=EE9INPT.

```
D+075+NELS+EMITTER+JU+DATA;
     Degrienelseemitterethansmissionefrequency-data----
     :=EF9INP1.EE0F+10+NELS+CANDIDATE+TARGETS+FILE.
     C+091+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA;
     O+ORS+WELS+EMITTER+X+DATAIREERINRY.
     EFOF+10+HELS+CAMDIDATE+TARGETS+FILE.
     U+GRS+NELS+EMTTTEP+X+DATA:
     DEGREENFLISHEMITTERAYADATA: = EGINP+. ....
     EFOF+1U+NELS+CANDIDATE+TAPGETS+FILE.
     0+086+NELS+FMITTER+Y+DATA;
     HADRIANFLSAEMITTERATADATA: EEGINP+
     EFUF+10+KELS+CAMDIDATE+TARGETS+FILE.
     C+037+HFLS+EMITTEP+7+DATA;
     C+130+SCENARIO+GEN+IO+NUM+DATA:#EEGINPT. ----
     EFOF+10+NELS+CAMDIDATE+TARGETS+FILE.
     D+130+SCENARIO+GEN+ID+NUM+DATA
     Elift #
EEOF+12+DETECTED+CANDIDATE+TARGETS+FTLE:
     BEGIN
   D+147+NFLS+EMISSION+DURATION+DATA: EEGINPt.
     EEOF+12+DFTECTEC+CANDIDATE+TARGETS+FILE.
     D+147+NELS+EMISSION+DURATION+DATA:
  Del48+NELS+EMISSION+SIGNAL+STRENGTH+DATA:=EF9INP+
     EEGF+12+DFTECTED+CAMDIDATE+TAPGETS+FILE.
     P+148+MELS+FMJSSIDN+SIGNAL+STRENGTH+DATA;
    -DA1434NELSAEMISSIONASTARTATIMEADATALEEGINP!
     EEOF+12+DETFCTED+CANDIDATE+TARGETS+FILE.
     U+149+NELS+EMISSION+START+TIME+DATA;
  D+150+XFLS+EMITTER+FREQUENCY+BANDWINTH+DATA
     :=EE9TMP1.EE0F+12+DETECTED+CAMDIDATE+TARGETS+FILE.
     D+150+1.ELS+EMITTEP+FREQUENCY+BANDWIDTH+DATA;
  ___C+151+NELS+EMITTEF+ID+DATA:=EE91NP1.
     EEOF+12+DETECTED+CANDIDATE+TARGETS+FILE.
     D+151+ NELS+FMITTER+ID+DATA;
 - D-152-NELS-EMITTER-TRANSMISSION-FREQUENCY-DATA
     :=EE9INP1.EE0F+12+DETECTED+CANDIDATE+TARGETS+FILE.
     0+152+NFLS+EMITTER+TRANSMISSION+FREQUENCY+DATA;
D+153+NELS+EMITTER+X+DATA: EEGINP+.
     EEGF+12+DETECTED+CANDIDATE+TARGETS+FILE.
     C+153+NELS+EMITTER+X+DATA;
... D+154+NELS+EMITTER+Y+DATAIREE9INP1.
    EFOF+12+DETECTER+CANDIDATE+TAPGETS+FILE.
     C+154+NFLS+EMITTER+Y+DATA:
    C+155+NELS+EMITTER+Z+DATAIREE9INP1.
     EFOF+12+DETECTED+CANDIDATE+TARGETS+FILE.
     C+155+NELS+ENITTER+7+DATA:
     D+156+SCENARIO+GEN+ID+NUM+DATA: #EEGINPT.
     EFOF+12+DFTECTED+CANDIDATE+TARGETS+FILE.
     D+156+SCEMARIO+GEN+ID+NUM+DATA
    END:
FEOF+13+NELS+EMISSION+THPEAT+TABLE+FILE:
     HEGIN
    Dec79+NELS+EMITJER+TIME+OF+LOCATION+DATA: #EEGINPT.
     EROF+13+NFLS+FMISSION+THREAT+TABLE+FILE.
     U+C79+NELS+EMITTER+TIME+OF+LOCATION+DATA;
     C+C+O+NELS+EMITTE++TRAFFIC+TYPE+DATA: #EE9INP+.
     EFUF+13+NFLS+EMISSION+THREAT+TABLE+FILE.
```

```
##ORO+NELS+EMITTER+TRAFFIC+TYPE+DATA;
   - L+171+HFLR+FHITTER+ID+CATAIBEEGINPT
    EFOF+134 NELS+EMISSION+THREAT+TARLE+FILE.
    D+171+NELS+EMITTER+TD+DATA;
    O+172+HELS+EMTITER+TRANSHISSION+FREQUENCY+DATA -
    :=EE91MPT.EE0F+13+NELS+FMISSION+THREAT+TABLE+FILE.
    1.+172+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA;
   - U+173+LELS+EMITTER+X+DATAIREEGINP+.
    EEOF+13+NELS+EMISSION+THREAT+TARLE+FILE.
    0+173+NFLS+EMITTER+Y+DATA;
   - O+174+NELS+EMITTER+Y+DATA1BEEGINP4.
    EFOF+13+NFLS+EMISSION+THREAT+TAPLE+FILE.
     DH174+NELS+EMITTER+Y+DATA1
EEOF+13+NELS+EMISSION+THREAT+TARLE+FILE.
    D+175+NELS+EMITTER+7+DATA;
    DETRIENTLISERMITTERENODULATIONETYPEEDATATEERINPT.
     EFOF+13+NELS+EMISSION+THREAT+TABLE+FILE.
     0+181+NELS+EMITTER+MODULATION+TYPE+DATA:
 EEOF+13+NELS+EMISSION+THREAT+TABLE+FILE.
     D41224NELS+EMITTER+RANDWIDTH+DATA;
 EFOF+13+NELS+EMISSION+THREAT+TABLE+FILE.
    D+183+NFLS+FMITTER+CEP+DATA
  - ···· (E \ 4) # -
FEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE:
    BEGIN
EFOF+14+NELS+FMTTTER+ACTIVITY+GROUND+TRUTH+FILE.
    0+053+5+NELS+EMTSSION+START+TIME+DATA:
 EFOF+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     0+064+NELS+EMISSION+STOP+TIME+DATA;
:=EF91%P1.
     EFOF+14+NELS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE.
    BACTSAGANELSAEMITIERAFREQUENCYARANDWIDTHADATA: ....--
     D+075+6+NELS+EMITTEP+ID+DATA:#EF9INPT.
    EFOF+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE.
MACHIA-BARFLSAFRITTERATHANSMISSIGNAFREQUENCYADATA
    :=EFGTND+.
 EFOF+144HFLS+FHITTEP+ACTIVITY+GPOUND+TRUTH+FILE+
     S+ORI+B+NELS+EMITTEP+TR4NSMISSION+FREQUENCY+DATA;
     OHOPZHNELSHFMTTTERHVELHYHDATA: #EEGINPT.
 ....EFOFELGENELSEEMITTEREACTIVITYEGROUNDETRUTHEFILE.
     NACSZANELSAFMITTERAVELAXADATA;
     (+093+NELS+EMTTTEP+VEL+V+DATA:=EEGINP+.
 EFORMING CHARLES AND THE CONCIL VITA OR OUND AT RUTH OF ILE.
     SHOP3+NELS+FMITTER+VEL+Y+DATA:
     ?+Of4+NELS+E4JTTEP+VEL+Z+DATA1#EE9INP+,
  ___ FFOF+1A+NELS+ENITIER+ACTIVITY+GROUND+TRUTH+FILE+
    C+004+NELS+FMITTE9+VEL+7+DATA;
    SHOPSHYHNFLSHFRITTERHXHRATAIRFERINPT.
     EFGF+14+ WFLS+EHITTED+ACTIVITY+GROUND+TRUTH+FILE.
     +035+3+NFLS+FATTTER+Y+DATA:
```

Source Listing

U+086+B+NELS+FMTTTEP+Y+DATA:#FE9INPt. EEOF+14+NFLS+EMTTTER+ACTIVITY+GROUND+TRUTH+FILE. D+086+6+NELS+EMITTER+Y+DATA; B+OR7+B+NELS+EMITTER+7+DATAIMEEGINP+. EFOF+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE. D+OR7+B+NELS+FHITTER+7+DATA; U+130+6+SCENARIC+GEN+ID+NUM+DATAIMEEGINPT. EEDF+14+NELS+EMTTTER+ACTIVITY+GROUND+TRUTH+FILE. D+130+B+SCENARIO+GEN+ID+NUM+DATA ENDI FEOF+15+NELS+EMITTER+CHARACTERISTICS+FILE: SFIGIN C+067+NELS+EMITTEP+RANDWINTH+PATA:=EEGINP+. EFOF#15#NFLS#FMITTER#CHARACTERISTICS#FILE. 1.40674NFLS+EMITTER+RANDWIDTH+DATA; 0+077+A+NELS+EMITTER+MONULATION+TYPE+DATA:=FE9INP+. EEGF+1S+NELS+EMITTER+CHARACTERISTICS+FILE. C+077+A+NFLS+FMITTER+MGOULATION+TYPE+NATA; SHOTE-A-HELS-EMITTED-PONEP-LEVEL-DATA: #EEGINPT. CECF+15+NELS+EMITTER+CHARACTERISTICS+FILE. D+078+A+HELS+ENTTTER+PUNER+LEVEL+DATA £":0: FEOF+ 16+bEL SHEMITTER OFTLE: L+063+A+NFLS+FHTSSIAN+START+TJME+DATA:=FE9INP+. EFOF+10+NFLS+EMTTTER+FILE. D+053+4+NELS+EMTSSION+START+TIMF+DATA: D+054+A+OFLS+FMTSSION+STOP+TIME+DATA:=EE9INPT. EFGF+16+NFLS+FMTTTER+FILE. U+064+A+0ELS+FMISSION+STOP+TIME+DATA; DEUTSEACHFUSEFHTTTEREFREGUETCYERANDHIDTHEDATA :=EF9INPT.EEOF+16+NFLS+FHITTER+FILE. U+073+A+NFLS+FMTTTER+FREQUENCY+RANDWIDTH+DATA; D+075+A+HFLS+FMITTER+ID+DATAIREF9INPT. EFOF+10+NELS+EMITTER+FILE. 6+075+A+ +FLS+EMTTTEP+10+DATA; D+031+4+1ELS+EMITTEP+THANSMISSION+FREQUENCY+DATA :=EE91001.EE0F+16+GFLS+FMITTER+FILE. DEDRIGATELS SENTITERS THAN SMISSION - FREDUENCY - DATA: H+042+A+NFLS+EMTTTER+VEL+X+DATATREE9INPt. EFOF+10+NFLS+5MTTTE8+FILE. U + 0 3 2 + 4 + NEL S+FMTTTER+VEL+X+DATA: C+033+4+NFLS+FMTTTER+VEL+Y+DATA:=FE9INPT. EFUF+16+NELS+EMITTEP+FILE. D-043-A-NELS-FHTTTEP-VEL-Y-DATA: D+D24+A+NELS+ENTTTER+VEL+Z+DATA:mEEGINP+. EEOF+10+NELS+EMITTEP+FILE. 1 4024+A+NFLS+FMTTTER+VEL+Z+DATA; DEURSHAHNELSEENITTEREXEDATA:=FERINDE. LEOF+16+HELS+EMITTEF+FILE. DED OF A CHELSEEMITTER CALADATA: S+656+A+NFLS+FHTTTEP+Y+PATAIMEEGINPT. LFQF+16+NELS+EMITTEP+FILE. +0°0+A+NELS+FFTTTER+Y+DATA: . +C4/+4+NFL S+FMTTTE9+7+DATA:=FEDINP+. EFNETTENAFLE SEFETTENAFILE. "+037+A+HFLS+FHTTTE7+7+HATA;

- Source Listina

U+130+4+SCENARIN+GEN+ID+NUM+DATAIREE9INPT. EFOF+16+NELS+EMITTER+FILE. 0+130+A+SCENARIO+GEN+ID+NUM+DATA END: FEOF+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE: BEGIN D+077+MELS+EMITTER+MODULATION+TYPE+DATAIREE9INPT. LEOF+17+NFLS+ESTIMATED+EMITTER+PAPAMETERS+FILE. U+077+NELS+EMITTER+MUNULATION+TYPE+DATA; D+078+NELS+EMITTER+POWER+LEVEL+DATA: =EE9INPT. EFOF+17+NFLS+FSTIMATED+FMTTTER+PARAMETER8+FILE. C+078+NELS+FHITTEP+PONEP+LEVEL+CATA; U+159+NELS+EMTITER+FREUUENCY+RANDWIDTH+DATA IMEFGINAT. EFOF+17+NELS+FSTIMATED+EMITTER+PARAMETERS+FILE. 0+159+4FLS+EMITTED+FREQUENCY+RANDWIDTH+DATA; U+141+NFLS+EMITTER+THANSMISSION+FREQUENCY+DATA : steffiler. EFOF+17+NELS+FSTIMATED+EMITTER+PARAMETERS+FILE. C+151+NELS+FMITTER+THANSMISSION+FREQUENCY+DATA END FEOF+18+"ELS+ESTIMATED+GROUND+TRUTH+FILE: AFGIN U+058+NELS+EMITTEP+CEP+DATA: #EEGINP+. EFOF+19+NFLS+FSTIMATED+GROUND+TRUTH+FILF. SHOUGHNELSHEMTTTERHOLPHDATA; 0+157+MELS+EMISSION+UURATIOM+DATA: #FE9INPt. EFOF+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE. DA1574NELSAEMISSIONADURATIONADATAL U+15d+NELS+FMISSINN+STAPT+TIME+DATA: #EEGINP+. FEUF+18+NELS+ESTIMATEP+GROUND+TRUTH+FILE. U+158+NELS+EMISSION+START+TIME+DATA; C+160+4FLS+FMTTTER+TD+DATAIREE9TNPT. EFOF+18+NFLS+FSTIMATED+GROUNU+TRUTH+FILF. DAIAGANFLSAEMITTERATOAGATA; C+162+NFUS+FMTTTEP+Y+PATA:=FEQINP+. EFOF+16+NFLS+ESTIMATED+RKMUND+TRUTH+FILF. DATAZANELSAEMITTERAXAPATAI L+1A3+NFLS+FMTTTEP+Y+DATAIREE9INP+. FFOF+18+NELS+FSTIMATED+RHOUND+TRUTH+FTLF. DALA SANEL SAEMTITE PAYADATA; L+154+HELS+FMITTER+7+DATA:=FEGINPT. EFOF+18+NELS+FSTIMATED+RROUNG+TRUTH+FILE. L+164+NFLS+EMITTEP+7+DATA; DA1654SCENAPIDAGENATUANHHADATALEEFGINPT. EFOF+18+NFLS+FSTIMATED+GROUND+TRUTH+FTLE. D+165+5CERARIC+GEN+TO+NHM+DATA FFOF+19+161 5+FRE JUFNOY+SCAN+FILE: NAUPZANELSAEKENASCANALONERAEKEGADATA: #EEGINPT. LEOF+19+NELS+FREGUENCY+SCAN+FILE. Deu 32 enflisef REGestanel unerefregebata: 0+093+1FL9+FREU+SCAM+HPPER+FREN+DATA:=EE91NPt. EFOF+19+NFLS+FREQUENCY+SCAN+FTLF. NEUP3ENFLSEFRENESCANEUPPEREFREGEDATA

F . F .

Source Listing

```
FEOF+20+NELS+PRE+BRIFFFD+A0I+FILE:
     BEGIN
     D+095+NELS+PRE+RRIEFED+A0I+FILTERING+CRITERIA+DATA
     :=EE9INP+.EE0F+20+NFLS+PRE+BRIEFED+A0I+FILE.
     D+095+NFLS+PRE+RRIEFED+A0I+FILTERING+CRITERIA+DATA;
     D+097+NELS+PRE+BRIEFED+40I+LOWER+LEFT+X+DATA
     :=EE9INPT_EE0F+20+NFLS+PRF+BRIEFED+A0I+FILE.
     D+097+NELS+PRE+BRIEFED+A0I+LOWER+LEFT+X+DATA;
     D+098+NELS+PRE+BRIEFED+40I+LOWEP+LEFT+Y+DATA
     :=EE9INP1.EF0F+20+NELS+PRE+BRIEFED+40I+FILE.
     D4098+NFLS+PRE+BRIEFED+AOI+LOWER+LEFT+Y+DATA:
     D+100+NELS+PRE+BRIEFED+ADI+UPPER+RIGHT+X+DATA
     :=EF9INPT.EE0F+20+NFLS+PRE+PRIEFED+A0I+FILE.
     041704NELS+PRE+RRIEFED+AUI+UPPER+RIGHT+X+DATA:
     0+101+NELS+PRE+RRIEFED+401+UPPER+RIGHT+Y+DATA
     :=EE9INPT.EE0F+20+NFLS+PRE+BRIEFED+A0I+FILE.
     D+101+NELS+PRE+RRIEFED+AUI+UPPER+RIGHT+Y+DATA
     ENDT
FEOF+21+NELS+PRE+BRIFFF0+S0I+FILF:
     HEGIN
     D41034NFLS4PRE48RTEFED480I4FND4FREQ4DATA:=EE9INPt.
     EEOF+21+NELS+PRF+9RTEFEP+9UI+FILE.
     D+103+NELS+PRE+9RIEFED+SOI+FND+FREQ+DATA;
     D+104+NELS+PRE+3RTEFED+SQI+FRFU+DATA:=EE9INPT.
     EFOF+21+NELS+PRF+9HTEFEN+SUI+FILE.
     ##104+NFLS+PHE+BRTEFED+SQI+FHEQ+DATA;
     0+105+NELS+PRE+RRIEFED+SOT+MODULATION+TYPE+DATA
     :=EF9INPT.EF0F+21+NFLS+PRE+RRIEFED+S0I+FILE.
     De10SemplsePRE+ARTEFED+SUI+MODULATION+TYPE+DATA;
     U+196+NFLS+PRE+PHIEFED+SOI+START+FREQ+DATA:=EE9INPt.
     FROFFRIENELS+PHELHARIEFED+SOI+FILE.
     DE106#HELSEPRE#RRIEFEC#SOI#START#FREQ#DATA
     ENDI
FEOF+24+"ELS+TDOA+DD+FILE:
     SEGIN
     D+058+NELS+FU+1+2+DATA:#EE9INPT.
     EFOF+24+NELS+TOOA+OO+FILE.D+OS8+NELS+DD+1+2+DATA;
     De059eHELSeDDe1+3+DATA:=EE91HP1.
     EEOF+24+NFLS+TOOA+DD+FILE.D+059+NELS+DD+1+3+DATA;
     C+050+NFLS+DO+2+3+DATA: =EE9INPT.
     EFOF+24+NFLS+TONA+DD+FILE.D+060+NFLS+DD+2+3+DATA;
     ##109+NELS+TUDA+1+2+DATA1#EE9INPT.
     EFOF+24+NFLS+TUPA+DP+FILE.D+109+NELS+TDOA+1+2+DATA;
     Dello+NELS+TOCA+1+3+DATA: #EE9INPt.
     EEOF+24+NELS+TOOA+DO+FILE.D+110+NELS+TDOA+1+3+DATA;
     C+111+NELS+TDOA+2+3+DAT41=EE9INPt.
     FEOF+24+NELS+TUDA+DD+FILE.D+111+NELS+TDDA+2+3+DATA
     ENDI
FEOF+25+MELS+TYPFO+EMITTER+REPORT+FILE:
     EEGIN
     U+070+NFLS+EMITTER+COV+DATA1#EE9INPt.
     EEOF+25+NELS+TYPED+EMITTER+REPORT+FILE.
     D+070+NELS+EMITTER+CUV+DATA;
     E-074+NELS+EMTTTEP+FREUHENCY+PATA: #EEGINPT.
     EEOF+25+NELS+TYPED+FMITTER+REPORT+FILF.
     C+074+NELS+FMITTER+FREQUENCY+DATA;
```

P+155+NELS+EMITTER+TD+DATAIMEF9INPT.

```
EFOF+25+NFLS+TYPEN+FMITTER+REPORT+FILE.
  - U+166+NELS+EMITTER+TD+DATA;
     D+167+NFLS+EMITTER+X+DATAIMEE9INPT.
     EFOF+25+NELS+TYPED+EMITTER+REPORT+FILE.
    D+157+NELS+EMITTEP+X+DATA1
     D+168+NELS+EMITTEP+Y+DATA:BEEGINP+
     EFOF+25+NELS+TYPED+FMITTER+REPORT+FILE.
   - 0+168+NELS+EMITTEP+Y+DATA;
     D+169+NELS+EMITTER+Z+DATA:=EE9INP+.
     EFOF+25+NELS+TYPEN+FMTTTER+REPORT+FILE.
   - G+149+NELS+EMITTER+7+DATA:
     D+170+SCEMARIO+GEN+TD+NUM+DATA: #EE9INPT.
     EEOF+25+NELS+TYPED+EMITTEP+REPORT+FILE.
  D+176+NELS+EMITTER+BANDWIDTH+DATA: #EEGINPT.
     EFOF+25+NELS+TYPED+EMTTTER+REPORT+FILE.
  --- O-176-NELS+EMITTER+RANDWIDTH+CATA+
     D+177+NELS+EMITTER+CEP+DATA: #FEGINP+.
     FEOF+25+NELS+TYPED+FMITTER+PEPORT+FILE.
     DALTTANELSAEMITTERACEPADATA:
     D+178+NELS+EMITTEP+MODULATION+TYPE+DATA: #EEGINPT.
     EEOF+25+NFLS+TYPED+EMITTER+REPORT+FILE.
    C+178+HELS+EMITTER+MODULATION+TYPE+DATA;
     D+179+NFLS+EMITTER+TIME+OF+LOCATION+DATA:=EE9INP+.
     EFOF+25+NFLS+TYPED+EMITTER+REPORT+FILE.
 -- O+179+NELS+EMITTER+TIME+OF+LOCATION+DATA;
     D+180+NELS+EMITTER+TRAFFIC+TYPE+DATA: #EEGINPT.
     EFOF+25+NELS+TYPED+EMITTER+REPORT+FILE.
- U-180-NELS-ENTITEP-TRAFFIC-TYPE-DATA
     END:
FEOF+26+4ELS+WEATHER+CONDITIONS+FILE:
  D+037+CLOUD+COVER+DATAIREEGINPT.
     EEOF+26+NELS+WEATHER+CONDITIONS+FILE.
    DADSTACEDUDACOVERADATA;
     D+039+ELEVATION+WFATHER+DATA: EEF9INP+.
     EFOF+26+NELS+WEATHER+CONDITIONS+FILE.
  De039+ELEVATION+*EATHER+UATA:
     0+120+PPECIPITATION+DATA: #EE9INPT.
     EFOF+26+NELS+WEATHEP+CONDITIONS+FILE.
    Del20mPRECIPITATIONADATA;
     D+144+X+HEATHEN+LOC+DATA: EEFGINPT.
     EFCF+26+NFLS+NEATHER+CONDITIONS+FILE.
  D+146+Y+WEATHEN+LOC+DATAIREEGINPT.
     EFOF+26+NELS+WEATHER+CONDITIONS+FILE.
    GA146AYAMEATHERALOCADATA
    END;
FEAF+27+PLATFORM+CONTROL+FTLE:
  - AFGIN
    U+010+ASP+ALTITUDE+DATA: #EEGINPT.
     EFOF+27+PLATFORM+CONTPOL+FILE.
    NAULGAASPAALTITUDEADATA;
     O+614+ASP+LOC+X+DATA:=EF9INPt.
     EFOF+27+PLATESPM+CONTROL+FILE.D+014+ASP+LOC+X+DATA;
     D+015+ASP+LOC+Y+DATAIREFGINPT.
     EFOF+27+FLATFORM+CONTRUL+FILE.D+015+ASP+LOC+Y+DATA;
```

```
17-Mar-1983 17:42:51
                                                  VAX-11 P
                             17-Mer-1983 17:19:39 DISKSUSE
- Source Listing -
    D+U16+ASP+LCC+Z+DATA:=EE9INPT.
-----EFOF+27+PLATFORM+CONTROL+FILE,D+016+A8P+LOC+Z+DATA;
    D+G22+ASP+VEL+X+DATAIMEE9INPT.
    EFOF+27+PLATFORM+CONTRUL+FILE.D+022+ASP+VEL+X+DATA;
    D+D23+ASP+VEL+Y+DATALEEF9INP+.
    EFOF+27+FLATFORM+CONTROL+FILE.D+023+ASP+VEL+Y+DATA;
    U+024+ASP+VEL+Z+DATA:=EE9INPT.
----EEUF#27+PLATEOHM+CONTROL+FILE-D+024+A8P+VEL+Z+DATA
    END:
EEOF+2P+PRJMARY+ROADS+FILE:
   AFG!N
    U+121+PRI 4ARY+ROADS+X+DATA:#EE9INPT.
    EFOF+28+PFIMARY+RBADS+FILE.
    De1214PRIMARY#RNADS#X#DATA#
    O+122+PRIMARY+ROADS+Y+DATA1#EE9INPT.
    EEOF+28+PPIMARY+ROADS+FILE.
    END;
FERF+29+PAILPOAD+LOCATIONS+FILE:
D+123+RAILROAD+LOC+Y+DATA1=EE9INPt.
    EFOF+29+RAILROAD+LUCATIONS+FILE.
U+124+RAILPOAD+LOC+Y+DATA1=FEGINPT.
    EFUF+29+RAILROAD+LOCATIONS+FILE.
 END:
EEOF+30+RIVEP+LOCATIONS+FILE:
   D+128+RIVER+LOC+X+DATA1#EEGINPT.
    EFOF+30+21VER+LOCATIONS+FILE.D+128+RIVER+LOC+X+DATA;
CA1234RIVER+LOCAY+DATA: EEGINPt.
    EFOF+30+FIVER+LOCATIONS+FTLE.D+129+FIVER+LOC+Y+DATA
FECF+31+32CONDARY+ROADS+FILE:
    HEGIN
    SHIBLESCONDARYHROADHXHDATAIRERINPT.
EEUF+31+SECONDARY+ROADS+FILE.
    D+131+SECONDARY+ROAD+X+DATA;
    De1324SECONDARY+ROAD+Y+DATAIREERINPT.
  ...EEOF631+SECOMDARYGROADS+FILE.
    D+132+SECONPARY+ROAD+Y+DATA
EEUF+! +SEUSOR+OREII+MODS+FILE1
    BEGIN
    9-117-PLATFORME-MODEX-DATA: #EEGINPT.
LEGE+32+SEMSIR+ORRITHMODS+FILE.
    MAI174PLATFORMAMODAXADATAS
    DELTGEPLATERRYENCHEVERATA: EFEGINPT.
  ___EESF#32#SEKSUF#ORFIT#MODS#FILE.
    DE118EFLATFORMEMODEMEDATAS
    Dellatenementatenatatateginet.
  EEOF+32+SENSUR+ORRITHMODS+FILE.
    DELIGHPLATERRESCOSEZERATA
    £ 1103
FEOF+33+SENSOH+PLATFORM+LOCATION+FILE:
    #FGTA
```

- E-48

```
C+114+PLATFORM+LOCATION+X+DAT4: #EE9INPT.
     EFOF+33+SENSOR+PLATFORM+LOCATION+FILE.
     Q+114+PLATFORM+LOCATION+X+DATA;
     DelisePLATFORMELOCATIONAY+DATAIMEEGINPT.
     EFOF+33+SFHSOR+PLATFORM+LOCATION+FILE.
     HELISEPLATFORMELOCATIONEYEDATA;
     D+116+FLATFORM+LOCATION+Z+DATAIEEE9INPT.
     FFOF+33+SFNSOR+PLATFORK+LOCATION+FILE.
     D+116+PLATFORM+LOCATION+Z+DATA
     E !: D :
FEDF+34+SEHSOR+STATUS+FILE1
     FFGTN
     JANUARAFREDUENCYASCAMAPARAMETERADATA:=EE9INP1.
     #FOF+34+SENSUR+STATUS+FTLF.
     0+0444FPERUENCY+SCAM+PARAMETER+DATA1
     24130+SENSOR+MURE+OF+PHERATION+PATA:=EE91NP+.
     EFOF+34+SFHSOR+STATHS+FTLE.
     C+130+5ENSCR+MODE+OF+CHERATTON+DATA
     E . () :
4401+ES+ FLS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN:
     0+002+ASET+MSG+DEST+DATA:=EE9INPT.
      *+01+FS+NFLS+UNTT+AND+ENVINDHMENT+DATA+M8G+IN.
     THU 12+48ET+"SG+PEST+DATA;
     . + 174+ASET+4SE+NAME+LATATHEF9TNPT.
     THEO THE SHIPE SHIPE THAT THE THE TROUBENT FOR TAPMS GOIN.
     UHONHASETH SALVAME HUATA;
      TADOSEASETAMSDASDURCEADATA:#EE9INPt.
      DAY 1 - F SAMEL SAUNTT - AMO - ENVIRONMENT - DATA - MSG - IN.
     I + COS+ASET+MSG+SOMPCE+DATA;
      EFITINE:=FE915P+.
      - + O 1 + F S + N F L S + H N T T + A H D + L H V T R O N M L H T + D A T A + M S G + T N .
      EFITTIE
      END:
MANSANELSACARTOAUPDATESA ISCATNI
      of GI.
      NERROSE TENSON ESTAL & TALZEFORMPT.
      HAUDANELSACARTHANDUATESANSGAIN.
      C+On2+ASET+"SG+DEST+UATA;
      L+004+ASET+PSG+PA"E+DATA:=EF9INPT.
      MAGRANEL SACARTUAUPDATESANSGAIN.
      CHONGHASETHYSEHMAMEHLATA;
      DECASE SETE SCESOURCE +DATA : =EE91NPT.
      MAGRANCI SACARTUAUPUA IFSAMSGAIN.
      D+DOS+ASET+MSG+SOURCE+DATA:
      EFITIME := FETIMP+ . M+02+NELS+CAPTO+UPDATES+MSG+IN.
      FFITI'E
      E wit
 TENSEL FL SECH AMANDERSERFUNIREMENTSEMSGEINS
      . F. 6 1 3
      E +002+ASET+MSG+DEST+LATAIMEEGINPT.
      HOGSOFELSOCHHANDERSONEDUTHENENTSOMSGOIN.
      CHOSZHASETH ISSHPESTHUATA;
      NAUGHASETAMSGAMAMEAUATATHEF9INPT.
      HOUSE EL SECTIONAL UPRISEREQUIREMENTS + MISGOIN.
      SHUNGHARETHI SCHNAMEHUATAS
      HARRITASETHYSG+SOMREHUATAIMEFGINPT.
```

```
M+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN.
     D+005+ASET+MSG+SOURCE+DATA;
     EFITIME: #FE9INP+.
     4+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN.EE1TIME
     ENUT
M+04+NELS+MODIFIED+TASK+MSG+IN:
     BEGIN
     U+GOZ+ASET+MSG+DEST+DATAIMEEGINPT.
     M+04+NELS+MODIFTED+TASK+MSG+IN.
     D+002+ASET+MSG+DEST+DATA;
     HAGG44ASETAMSG4NAMEADATAIREEGINPT.
     M+04+HELS+MODIFIED+TASK+MSG+IN.
     040044ASET+MSG+MAME4DATAI
     U+005+ASET+MSG+SOURCE+DATA:=EF9INPt.
     M+04+NELS+MODIFIED+TASK+MSG+IN.
     D+005+ASET+MSG+SOURCE+DATA;
     D+056+NEEDED+FEASTBLE+DATAIREE9INPT.
     M+04+MELS+MODIFTED+TASK+MSG+IN.
     0+050+NEEDED+FEASTBLE+LATAI
     D+139+TASK+DUE+ID+DATA:=EE9INPt.
     M+04+NELS+MOUIFTED+TASK+MSG+IN.
     D+139+TASK+BUE+TD+DATA;
     EFITIME: #FEGINPT . M+04+NFLS+MODIFIED+TASK+MSG+IN.
     EFITIME
     ENGI
1 +06+NELS+CHEIT+MUDIFICATIONS+MSG+IN:
     2+002+ASET+MSG+PEST+DATA:=EF9INPT.
     # + O & + NELS + OR SIT + MOUTHICATIONS + MSG + IN.
     D+002+ASET+MSG+FEST+DATA;
     D+004+ASET+MSG+NA 1E+DATA: EEF9INPT.
     MEGBELS-ORBIT-MODIFICATIONS-MSG-IN.
     D+004+ASET+MSG+NAME+DATA:
     U+005+ASET+MSG+SOURCE+DATA #= LEGINPT.
     M+C6+NELS+URBIT+MODIFICATIONS+MSG+IN.
     C+005+ASET+MSG+SQURCE+DATA;
     U+1354SFNSUR+TD+DATA:=EF9INPt.
     nedsenelseuraltendulficationsemsGein.
     C+135+SENSUR+TD+CATA;
     EEITIME: = FEGINAT.
     M+06+NELS+URBIT+MOUIFICATIONS+MSG+IN.EE1TIME
     £ 110 $
'+OR+WELS+PHIGPITIZED+SENSOR+UTRECTIONS+MSG+IN:
     aegin
     D+092+ASET+MSG+DEST+DATAIMEEF9INP1.
     *+03+NELS+PGIORTTTZFD+SENSOR+DIPECTIONS+MSG+IN.
     DeGOZEASETEMSGEDESTEDATA:
     G+GO4+ASET+WSG+WAME+UATAIMEEGINPT.
     *+OA+TELS+PRIORITIZED+SENSOR+DIPECTIONS+MSG+IN.
     GEOD4+ASETER SGENAME+DATA;
     U+075+ASET+MSG+SOUNCE+DATAIREF9INPT.
     M+03+NELS+PRIDHITIZED+SENSOR+DIRECTIONS+MSG+IN.
     D+005+ASET+MSG+SOURCE+DATA;
     "+056+MEEDED+FEASIALE+DATA:=EEGINPT.
     MANGAMELSAPRIORITIZECASENSURADIRECTIONSAMSGAIN.
     L+056+NEEDED+FEASTHLE+DATAI
     C+135+SENSOR+IO+DATA:=EF9INPt.
```

```
M+0A+NELS+PRIGRITIZED+SENSOR+DIRECTIONS+MSG+IN.
    0+135+SENSOR+ID+DATA:
    D+137+SENSOR+PRIORITY+DATAL EEGINPT.
    M+OS+NELS+PRICRITIZED+SFNSOR+DIRECTIONS+MSG+IN.
    0+137+8ENSOR+PRIORITY+DATA;
    EEITIME:=FEGINPT.
    M+OB+NELS+PRIDRITIZED+SENSOR+DIRECTIONS+MSG+IN.
    EFITIME
    END;
M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN:
    REGIN
    U+002+ASET+MSG+DEST+DATA: #EE9INPT.
    M+09+NELS+RFWUESTFD+SENSOR+DATA+MSG+IN.
    D+002+ASET+MSG+DEST+DATA;
    D+004+ASET+MSC+NAME+DATAIREEGINPT.
    M+09+NELS+REWUESTED+SENSOR+DATA+MSG+IN.
    D-UD4+ASET+MSG+NAME+DATA;
    D+005+ASET+MSG+SOURCE+DATAIMEF9INPT.
    M+09+NELS+RF #UESTED+SENSOR+DATA+MSG+IN.
    U+005+ASET+MSG+SOURCE+UATA;
    D+045+GPS+ID+DATA:=FE9INP+.
     MAUSAMELSAREQUESTEDASENSORADATAAMSGAIN.
    D+045+GPS+ID+DATA;
    EEITIME:=FE91MP+.
    MEORETELSERENTESTEDESENSOREDATAEMSGEIN.EEITIME
    ENDI
M+15+T+AND+C+STOP+NELS+MSG+IN:
    UEGIN
    D40024ASET#MSG+DEST+DATA = EF9INPT.
    MAISATAANDACASTOPANELSAMSSAIN.
    DEUPZEASETENSGEPESTEDATA;
    U+GA4+ASET+MSG+HAME+DATAIREF9INPT.
    MAISATAANDACASTOPANELSAMSGAIN.
    D+004+ASET+MSG+NAME+DATAS
    U+005+ASET+MSG+SUMPCE+DATAIREEGINPT.
    M+15+T+AND+C+STOP+NFLS+MSG+IN.
    U+015+ASET+MSG+SOURCE+DATA;
    ERITIME : TEESINPT . M+15+T+AND+C+STOP+NELS+MSG+IN.
    EE1TIME
    ENGS
M+05+melsenon+surveillange+target+reports+msg+out:
     SFGIN
    U+002+4SET+MSG+DEST+DATAIMEF9INPT.
    . MEDSENELSENDNESURVETLLANCEETARGETEREPORTSEMSGEDUT.
    D+002+ASET+MSG+DEST+DATA;
    D+004+ASET+MSG+NAME+UATAIREEGINPT.
    Megsemelsenonesurvetllance+targetereportsemsgeout.
    CHORACASET+MSG+NAME+DATAS
    U+005+ASET+YSG+SQURCE+DATA:=EF9INPT.
     MACSONELSANONASURVEILLANCEATARGETARGETARGADUT.
    D+005+ASET+MSS+SOURCE+DATA;
    D+045+GPS+ID+DATAINFE9INPT.
     MOSSEL SENON-SURVETLL ANCESTARGET SERORTS SANSGOUT.
    G+045+GPS+ID+DATA:
    U+046+GPUUND+TARGFT+FREQUENCY+DATA: #EE9INPT.
     M+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT.
     N+046+GROUND+TARGET+FREQUENCY+DATA;
```

```
D+047+GPOUND+TAPGFT+LFNGTH+DATA1=EEGINP+.
     M+05+NELS+NON+SURVEILLANCE+TARGET+REPORT8+MSG+QUT.
     C+047+GROUND+TARGET+LENGTH+DATA;
     C+D50+GROUND+TAPGET+VELOCTTY+DATA: #EE9INP+.
   - K+05+NELS+NON+SHRVETLLANCE+TARGFT+RFRORTS+MSG+OUT
     D+050+GROUND+TARGET+VELOCITY+DATA;
     EFITIME: = FEGINP+.
     N+OS+NELS+NON+SURVEILLANCE+TARGFI+REPORTS+MSG+OUT.
     EE1TIME
     END;
EFGIN
     U+012+ASET+MSG+DEST+DATAIMEE9INPT.
  D+002+ASET+MSG+DEST+DATA;
     C+074+ASET+MSG+NAME+DATAIREE9INPT.
    MAOTANELSAPLATERRALUCATIONAREPRATSANSGADUT.
     D+004+ASET+HSG+MAME+DATA;
     D+005+ASET+MSG+SOURCE+DATA: #EE9INPT.
     C+005+ASET+MSG+SOURCE+DATA;
     EFITIME:=EE9INPT.
   MAD7+NELS+PLATECRM+LOCATION+REPORTS+MSG+OUT_EETTIME
     END:
M+10+NFLS+SENSOR+REQUESTS+MSG+DUT:
    --- bFGIb---
     D+002+ASET+MSG+DEST+DATA: #EE9INPT.
     M+10+NELS+SENSOP+REQUESTS+MSG+OUT.
  U+002+ASET+MSG+DEST+DATA:
     L+004+ASET+MSG+MAME+DATA:=EE9INPT.
     M+10+WELS+SENSOP+REQUESTS+MSG+OUT.
     C+004+ASET+MSG+MAME+DATA;
     D+005+ASET+MSG+SOURCE+DATA:#EE9INPt.
     M+10+NELS+SENSOP+REQUESTS+MSG+OUT.
     D+005+ASET+MSG+SOURCE+DATA:
     0+125+REQ+DESTINATION+SENSOR+ID+DATAIREE9INPT.
     M+10+MELS+SENSOR+PEDUESTS+MSG+OUT.
  De125+REQ+DESTINATION+SENSOR+ID+DATA:
     U+126+REG+REPORT+INFORMATION+TYPE+DATAS=EEGINPT.
     M+10+NELS+SENSOR+REQUESTS+MSG+OUT,
     D+126+REC+REPORT+INFORMATION+TYPE+DATA:
     0+127+KEU+SENSOR+TARGET+ID+OF+INTEREST+DATA
     :=EE9TNP1.M+10+NEUS+SENSOP+REQUESTS+MSG+OUT.
     D+127+REU+SENSUR+TARGET+10+0F+INTEREST+DATA;
     D+135+SENSOR+TD+DATA: #EE9INPt.
     M+10+NELS+SENSOR+REQUESTS+MSG+OUT.
     C+135+SENSOR+10+DATA;
     EF1TIME: #EE9IMP+. M+10+NELS+SENSOR+REQUESTS+MSG+OUT.
     EE1TIME
     END:
M+11+NFLS+SENSOR+SYSTEM+STATUS+MSG+QUT:
     D+002+ASET+MSG+DEST+DATAINEEGINPT.
     H+11+NELS+SENSOR+SYSTEM+STATUS+MSG+OUT.
     D+002+ASET+MSG+DEST+DATA;
     D+004+ASET+MSG+NAME+DATA:#EE9INP+.
     ++11+NELS+SENSOP+SYSTEM+STATUS+MSG+OUT.
```

VAX-11 F

Source Listing .EEITIME ENDI SEGIN

"+14+NELS+TRACK+MESSAGF+MSG+DUT1 D-002-ASET-MSG-DEST-DATA : MEEF9INPT. MAI MANEL SATRACKAMESSAGEAMSGAOUT. DEUNZEASETEMSGEDESTEUATAI U40044ASET+MSG+NAME+DATA1=EE9INPT. HA144NELSATRACKAMESSAGEAMSGAOUT. 0+004+ASET+MSG+NAME+DATAI U+005+ASET+MSG+SOURCE+DATA:=EF9INPT. VATIANCESATRACKAMESSAGEAMSGACHT. O+005+ASET+MSG+SUMRCE+DATA;

0+135+SENSUR+TO+GATA1=EF9INPT. MAINANELSATRACKAMESSAGEAMSGAOUT.DA1354SENSORAIDADATA D+142+TRACK+MESSAGE+DATA: EEFGINPT.

HATHAMELSATRACKAMESSAGEAMSGAOUT. HALUZATHATHAMESSAGEADATA; EEITIME:=FEGINP: M+14+NFLS+TRACK+MESSAGE+MSG+OUT. EF1TIME F 111. 1

FEOET+10+GROUND#SHADO#ING+CANDIDATF+TARGETS+ET: De140+TAL+CATAL=EF9TNPT.

EFOFT+10+GROUND+SHADDWING+CANDIDATE+TARGETS+ET. D-140-TRD-DATA ENDI

FERETASAMELSAMREABRIFFFDASCIAET: REGIN

2+1 IO+TPU+DATA:=EE9TGPT. EEGET+5+NFLS+PHF+3RTEFED+SOT+ET.D+140+TRD+DATA E-10:

FEDET+R-VELS+PRE+BRIFFFD+ADI+ET: REGIN

L+140+THU+DATA:=EFYTHPT. EFOF I+ SHNELSHPREHPRIEFENHADIHET. D+140+T8D+DATA E VE 1

FECET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET: U+140+TED+DATA: =EE9INPT. EFOFT+9+SIGNAL+NOISF+CANDIDATE+TARGETS+ET. 341334T404B4T4

C40: FEORT+2+VELS+EMITTER+GROUND+TRUTH+FT: U+140+TBD+DAT4: #EE9THPT. FEOF 1+2+NELS+FMITTER+GROUNU+TRUTH+ET.D+140+TBD+DATA

EMOS EE 1E T+ T+ "ELS+ NEATHER+ET : MEGIN D+140+T9D+DATA: #EF9INPT.EEOFT+7+NELS+WEATHER+ET. G+140+TEU+DATA ENDE

FERET+3+9ELS+FLIGHT+FT1 SEGT V 1+14C+THO+HATA:=EF9TNP1.EF0ET+3+NFLS+FLIGHT+ET.

```
D+140+T8D+DATA
              ENDI
         FEOET+4+NELS+FREQUENCY+SCAN+ET:
               EEGIN
              0+140+TRU+DATAIMEF9INPT.
               EEDET+4+NELS+FREGHENCY+SCAN+ET.D+140+TBD+DATA
              ENDS
         FEGET+1+NELS+EMISSION+THREAT+ET:
              PEGIN
               D+140+TBD+DATA:=EF9INPT.
               EFOET+1+NELS+FHISSION+THREAT+FT.0+140+TBD+DATA
               E 1.0 ;
         FEORT+6+NELS+VFHIGLE+CHARACTERISTICS+ET:
              HEGIN
               D+140+TBD+DATA;=EE9TNPt.
               EFORT+6+NELS+VEHICLE+CHARACTERISTICS+ET.
              D+140+TRD+D4TA
               E* 6:1
         FERET+11+UFTFCTER+EMISSIONS+DD+TDQA+ET:
               HFGIN
               END:
          FENET+12+DETECTED+EMISSIONS+COARSE+ET:
               REGIN
              E101
          EcoET+13+DFTECTED+FMISSIONS+FINE+ET:
               HEGIN
               EM0
          FND
    END (* FFAYIT *);
PROCEDURE FEELDIN(FEGINS:EE7THLST);
    EFETN
    CASE FERINS OF
         FEINCIN:
         FEOF+01+9RIDGE+LOCATIONS+FILE:
               C+026+PRINGE+LUC+X+NATA 1# 0.0;
               D#027+BRINGE+LUC+Y+DATA := 0.0
               END:
          FEOF+02+CARTO+UPDATE+FILE:
               REGIN
               0+029+CARTO+SECTION+NUM+UATA := 0;
               DEU30+CARTO+UPDATE+1+DATA IR BRIDGE;
               De031+CARTO+UPLIATE+2+CATA := BRIDGE;
               D+032+CARTG+UPDATE+3+DATA := BRIDGE;
               0+033+CARTO+UPUATE+X+PATA 19 0.01
               U+034+CARTO+UPUATE+Y+DATA := 0.0
              END:
         FEOF+03+CITY+LOCATIONS+FILF:
               aFGTN
               D+035+CITY+LUC+Y+DATA := 0.0;
               0.0 036+CITY+LUC+Y+DATA IR 0.0
              ENDI
          FEOFEO4+CHORS+DATA+TO+HPOATE+FTLE:
               4FGI'
               DeG40+FIRST+CMDRS+RFQ+UPDATE+DATA := IN+AREA;
               D+133+SECONO+CHORS+PER+UPDATE+DATA := IS+MODULATED
                                  E-55
```

Scurce Listina

17-Mar-1983 17:42:51

17-Mer-1983 17:19:39

VAX-11 P

DISKSUSE

```
17-Mer-1983 17:42:51
                                                              VAX-11 F
                                    17-Mer-1983 17:19:39
 Source Listing
                                                              DISKSUSE
      END;
FEOF+05+FEASIBLE+ACTIVITY+AREA+FILE:
      D+143+X+LOC+FEASIBLE+DATA ## 0.0;
      D+145+Y+LOC+FEASIBLE+DATA ## 0.0
     END;
FEOF+06+FLIGHT+PROFILE+FILE:
      BEGIN
     D+041+FLIGHT+WAYPOINT+X+DATA 1= 0.0;
D+042+FLIGHT+WAYPOINT+Y+DATA 1= 0.0;
      D+043+FLIGHT+WAYPRINT+Z+DATA := 0.0
      ENDI
FEOF+07+GROUP+TARGET+LOCS+FILE:
      D+048+GPOUND+TARGET+LOC+X+DATA := 0.0;
      D+049+GROUND+TARGET+LOC+Y+DATA IS 0.0
     ENDI
FEDF+09+HYPSO+DATA+FILE:
     BFGIN
     D+051+HYPSO+ELEV+DATA := 0.0;
     0.0;
0+052+HYPS0+L0C+X+UATA := 0.0;
0+053+HYPS0+L0C+Y+DATA := 0.0
     END:
FECF+UP+ MARSHALLING+ARFAS+FILE:
      BFGI4
      DEGSHEMARSHALLINGEXEDATA := 0.0;
     D+055+MARSHALLIMG+Y+DATA := 0.0
     E 40 :
EEGF+10+4ELS+CANDIDATE+TARGETS+FILE:
      BEGIN
     De051+NELS+FHISSION+DURATION+DATA := 0.01
      0.0; 0+062+NELS+ENISSION+SIGNAL+SIRENGTH+DATA := 0.0;
      U+063+NELS+EMISSION+STARI+TIME+DATA #= 0.0;
      0+073+NELS+EMITTER+FREQUENCY+RANDWIDTH+DATA := 0.0;
      D+075+NELS+EMITTER+ID+DATA := RADIO;
     0+021+NFLS+FMITTEP+TRANSMISSION+FREQUENCY+DATA :=
      0.0:
      DeoRSenELSeEMITTERevenata.:= 0.0;
      DEORGENELSEMITTEREYEDATA := 0.0;
      D+037+NELS+FMITTER+Z+DATA 1= 0.01
      De1304SCENARIGEGE GIDENHADATA IE 0
     END;
FEOF+12+DETECTED+CANDIDATE+TARGETS+FILE:
      BEGIN
      D+147+NFLS+EMISSION+DURATION+DATA := 0.0;
      D+148+NFLS+EMISSION+SIGNAL+STPENGTH+DATA := 0.0;
      L+149+NELS+EMISSION+START+TIME+DATA := 0.0;
      D+150+NFL8+EMITTER+FREQUENCY+BANDWIDTH+DATA := 0.0:
      C+151+NFLS+EMITTER+TD+DATA 1= PADIO:
     C+152+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA_I=____
      0.0;
      D+153+NELS+EMITTEP+Y+DATA ## 0.0:
D+154+NELS+EMITTER+Y+DATA ## 0.01 ....
D+155+NFLS+EMITTER+7+DATA ## 0.01
      U+156+SCEMARIO+GEN+ID+NUM+DATA ## 0
      EMD:
```

FEAF+13+VELS+FMISSION+THREAT+TABLE+FILE:

```
17-Mar-1983 17:42:51
                                                      VAX-11 F
                                                     DISKSUSE
                                17-Mer-1983 17:19:39
  Source I istino
 - - U+079+NELS+EMITTER+TIME+OF+LOCATION+DATA := -0.0;
     0+080+NELS+FMITTER+TRAFFIC+TYPE+DATA := PASSIVE;
     U+171+NFLS+EMITTEP+10+DATA 18 TADIO;
  0.0:
     D+173+NELS+EMTTTER+X+DATA 18 0.0;
 --- 0+174+NELS+EMITTER+Y+DATA ## 0.0+
0+175+NELS+EMITTER+Z+DATA ## 0.0+
      D+181+NELS+EMITTER+MODULATION+TYPE+DATA :=
    ----- <del>+ Q3</del>T4.Jµggx ....
      D+192+NELS+EMITTER+RANDWIDTH+DATA := 0.0:
      0+183+NFLS+EMITTER+CEP+DATA := 0.0
    - E40 +-
FEOF+14+ YELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE:
     BEGIN
     -FA-GA-3-BANELS-EMISSION-START-TIME-DATA 1= -0.01
      0.0;
      0+073+6+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA :=
D+075+8+NELS+EMITTER+ID+DATA := RADIO:
     D-081+B+NELS+FMTTTER+TRANSMISSION+FREQUENCY+DATA
      -----
     D+082+NELS+EMITTER+VEL+X+DATA := 0.0:
D+083+NELS+EMITTER+VEL+X+DATA := 0.0:
  D+095+6+NELS+EMITTER+X+DATA := 0.0;
      De086+BeNELS+EMITTER+Y+DATA (# 0.0)
     DOORTANANELSAFMITTERAZADATA := 0.01
     D+130+8+SCENARID+GEN+ID+NUM+DATA := 0
     ENDI
- FECF+15+ VELS+EMITTER+CHAPACTERISTICS+FILE+
     BEGIN
      0+067+NELS+EMTTTER+MANDWIDTH+DATA := 0.0:
      AAO774A4NFLS4EMITTER4MODULATION4TYPE4DATA +=
      MODULATED:
      D+078+A+NFLS+EMITTER+POWER+LEVEL+DATA ## 0.0
     ENUP
 FEGF+16+NELS+EMITTER+FILE:
      BEGIN
     Decasemerseemissionestarietimeedata := 0.0;
      0.0:
      D+073+A+NELS+FMITTER+FREQUENCY+RANDWIDTH+DATA :=
     -0-0+--
     U+U75+A+NELS+EMITTER+ID+DATA := RADIO:
      D-081+A+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
      0+032+A+NELS+EMITTER+VEL+X+DATA := 0.0:
     D+093+A+NELS+EMITTER+VEL+Y+DATA := 0.0:
  - CASHAAANELSAEMITTERAVELAZADATA 18 0.01
     0+025+A+NELS+EMITTER+X+DATA := 0.0;
     Dechaenelsemitterevedata := 0.0;
     U40574A+NELS4EMITTER4Z4DATA 18 0.01
     D+130+A+SCENARIO+GEN+ID+NUM+DATA 1# 0
     £40.7
 FEOF+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE:
     HEGIN
```

4

```
17-Mar-1983 17:42:51
                                                          VAX-11 F
                                  17-Mer-1983 17:19:39
                                                         DISKSUSE
- Source Listing
      D+077+NELS+EMITTER+MODULATION+TYPE+DATA ##
    D+C78+NELS+EMITTER+POWER+LEVEL+DATA :=
                                             0.0;
      D+159+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA := 0.0:
      C+161+NEL8+EMITTEP+THANSHISSION+FREQUENCY+DATA IS
      0.0
      END:
FEOF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE1----
      BEGIN
      0+068+NELS+EMITTER+CEP+DATA := 0.01
      C-157-NELS+EMISSION+DURATION+DATA += O.O.
      D+158+NELS+EMISSION+START+TIME+DATA := 0.0;
      S+160+NELS+EMITTER+ID+DATA := RADIO:
     C+142+NELS+EMITTER+Y+DATA TE 0.0+
      D+163+NELS+EMITTER+Y+DATA := 0.0;
D+164+NELS+EMITTER+7+DATA := 0.0;
     De165+SCENARIO+GEN+ID+NIM+DATA 18 0 .....
      END:
 FEOF+19+NELS+FREQUENCY+SCAN+FILE:
    - BECIN
      D+092+NELS+FREQ+SCAN+LOWER+FREQ+DATA := 0.0;
      D+093+NELS+FREQ+SCAN+UPPEP+FREQ+DATA ## 0.0
    -END+
 FEOF+20+NELS+PRE+6RIEFFD+A0I+FILE:
      BEGIN
     -)+095+WELS+PRE+RHILFED+AOI+FILTERING+CRITERIA+DATA-
      := WITHINGAREA:
      D+097+NELS+PRF+PRIEFEP+ADI+LOWER+LEFT+X+DATA := 0.0
      S+098+NFLS+PRF+ARIEFED+ADI+LOWER+LEFT+Y+DATA := 0.0
      Delruenelserreebriefedeaoi-uppererightexedata :=
      0.0:
      0+101+NELS+PRE+PRIEFED+AUI+UPPER+RIGHT+Y+DATA 1=
      ٠.٠
      E401
 FECF+21+1ELS+PRE+BRIFFED+SDI+FILE:
      L+103+NELS+PRE+RRIEFED+SOI+END+FREQ+DATA #= 0.0;
      D+104+NELS+PRE+APTEFED+SOI+FREG+DATA := 0.0;
      C+105+NELS+PRE+BRIEFED+SOI+MODULATION+TYPE+DATA ::
      *OUTLATED:
      P+105+NELS+PRE+RRIEFED+SOI+START+FREQ+DATA := 0.0
    E::0:
 FERF+24++ELS+TDOA+DD+FILE:
      HEGIN
      D+058+NELS+DD+1+2+DATA 1# 0.0:
                                 0.0;
      0+059+NELS+D0+1+3+0ATA I=
      T+060+NELS+00+2+3+DATA := 0.01
      DelG9eNELSelDCAel+2+DATA IE 0.01
      D+110+NELS+TD0A+1+3+DATA ## 0.0;
      D+111+NELS+TDDA+2+3+DATA ## 0.0
    ENC:
 FEMF+25+MELS+TYPFD+EMITTER+REPORT+FILE:
      FEGIN
      GAGTOANFLESEEMITTERACOVANATA := 0.0:
      SHOTHENFLSHEMITTERHERENIZATA := 0.0:
```

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17-Mar-1983 17:42:51
                                   17-Mar-1983 17119139
 Source Listing
     D+166+NFLS+EMITTER+TD+DATA := RADIM:
     0-167+HELS+EMITTER+X+DATA 18 0.01
     D+169+NELS+EMITTER+Y+DATA 1= 0.0;
D+169+NELS+EMITTEP+7+PATA 1= 0.0;
     D+170+SCENARIO+GEN+TD+NUM+DATA IN 01
     D+176+NELS+EMITTER+RANDWINTH+DATA :=
     34177+NELS+EMITTER+CEP+DATA ## 0.01
     D-17d+NELS+FMITTEP+MUDULATION+TYPE+DATA :=
     MOCHLATED:
     C+179+NELS+EMITTER+TIME+OF+LOCATION+DATA := 0.0;
     U-140-NELS-EMITTED-THAFFIC-TYPE-DATA IN PARSIVE
     £ 40 :
FEOF+25+MELS++FATHEX+COMDITIONS+FILE:
     MEGIN
     0-037+CLOUD+COVER+DATA := CLEAR:
     D+039+ELEVATION+WEATHEH+DATA := 0.0:
     O-120+PRECIPITATION+DATA := NONE:
     UNIANEXENEATHERALICADATA := 0.0;
     DETHREYERFATHERELACEDATA := 0.0
     E-HUT
ELOF-27+PLATFORM+CONTHOL+FTLE:
     BEGIN
     DEGIGEASPEALTITUDE+DATA := 0.0:
     CHUI4+ASPALOCAXADATA :=
                                0.0;
     E+015+ASP+LPC+Y+DATA :=
                                0.01
     DERIOFASPELMCEZEGATA 15
                                0.0;
     D+022+ASP+VFL+X+DATA :=
                                0.0;
     U+023445F+VEL+Y+U4T4 1=
                                0.0;
     LAGRASPAVELAZADATA :=
                                0.0
TEOF+28+PRIMARY+RUAUS+FILE:
     D+121+PPIMAPY+RDADS+X+DATA 1= 0.0;
     L+122+PPIMARY+ROADS+Y+DATA := 0.0
     END!
FEOF-20+0ATEROAD+LOCATIONS+FILE:
     BEGTA
     Hel23+RAILHHAD+LGC+x+DATA := 0.0:
     T+124+FAILHCAO+LOC+Y+DATA :=
     £50:
FEOFESOERS VERELUCATIONS FILES
     FFIFT
     CHIZBERIVER-LOCHX+DATA := 0.0;
     L-129-KTVFR-LOC-Y-UATA := 0.0
     F 117 1
FEOF+31+SECOMMARY+ROADS+FILE:
     of GI.
     THIBLESECONDARY HOADEVEDATA := 0.0:
THIBLESECONDARY HOADEVEDATA := 0.0
     K 301
FEOF+37+9E'SON+OPHIT+MODS+FILE:
     BEGIN
     DellTePLATFORMENODEXEDATA := 0.0:
     U+1184PLATECRY+1004Y+DATA IS
                                     0.0;
     DELL PEPLATFORMEHODEPEDATA 1#
     E 10;
FEOF+ SRESENSOREPLATFORMALUCATIONAFTLES
```

VAX-11 F

DISKSUSE

```
- Source Listing
                                   17-Mar-1983 17:19:39
                                                           DISKSUSE
      L+114+PLATFORM+LOCATION+X+DATA #= 0.0;
      D+115+PLATFORM+LOCATION+Y+DATA := -
                                         0.0;
      P+116+PLATFORM+LOCATION+Z+DATA := 0.0
      END+
 FEOF+34+SENSOR+STATUS+FILE:
      D+044+FREQUENCY+SCAN+PARAMETER+DATA :=
                                              0.01
      0+136+SENSOP+MODE+OF+MPERATTON+MATA :=
      SOI+SURVETLL ANCE
      END
 M+01+ES+MELS+UMIT+AND+ENVIRONMENT+DATA+MSG+IN:
      PEGIN
      D+002+ASET+MSG+DEST+DATA := TC:
      0+004+ASET+MSG+NAME+DATA 1#
      MM+01+ES+NELS+UNIT+AND+ENVIRONMENT+DATA:
      D+005+ASET+MSG+SOURCE+DATA := TC;
      EF80USIN(FE9US(F+16+NFLS+FMITTEP+FILE));
      EFAININ(EFOF+16+NFLS+EMITTER+FILE)
      END:
 Menzenelsecartoeuppateremscein:
      BEGIN
      De002+ASET+MSG+DEST+DATA := TC;
      D+004+ASET+MSG+NAME+DATA 1#
      MN+01+ES+NELS+UNIT+AND+FNVIRONMENT+DATA:
      D=005+ASET+MSG+SOURCE+DATA := TC:
      EFADDSIN(FE90S(F+D2+C4HT0+UPDATF+FILE));
      EF81NIN(EF0F+02+CARTO+UPDATE+FILE)
      ENO:
 MECSENFLESECU AMANDEPSERFWHIREMENTSEMSGETN:
      OFGIN
      D+002+ASET+MSG+DEST+DATA 1= TC:
      0+004+ASET+MSG+NAME+DATA 1=
      MM+01+ES+MELS+UNIT+AND+ENVIRONMENT+DATA;
      DecoseaseTemsgesource+DaTA := TC;
      EFHOUSIN(FERUS[F#04+CMDPS+DATA+TO+UPDATF+FILE]);
      FFEININIEENFAMA+CMURS+UATA+TU+UPDATF+FILE)
      END:
 M+04+NELS+MODIFIFD+TASK+MSG+IN1
      OFGIN
      D+Q02+ASET+MSG+DEST+DATA := TC:
      DECOMEASE THE SHENA TENDATA 18
      MN+01+ES+NFLS+UNIT+AND+ENVIPUNMENT+DATA;
      U+035+ASET+HSG+SUMRCE+DATA #= TC#
      U+056+NEEPED+FEASTBLE+DATA 1= SOI:
      0+139+TASK+RUE+TD+DATA := 0;
      EEBODSIN(EE9DS(F+O5+FEASIBLE+ACTIVITY+AREA+FILE)):
      EFAININ(LEOF+05+FFASIRLF+4CT[VITY+AREA+FILE)
      END:
 "+06+NELS+CHBIT+MUDIFICATIONS+MSG+INE
      PEGIN
      D+002+ASET+MSG+DEST+DATA 1=
      0+094+ASET+MSG+NAME+DATA 1#
      PHICH OLICES CHELS COMIT CAN PERVIRONMENT CONTACT
      D+005+ASET+MSG+SOHRCE+DATA 1= TC;
      C+135+SENSUR+TO+DATA := NELS+GPS+1;
      EFROOSIN(EE905 (F+32+SENSOR+ORHIT+MODS+FILE)):
```

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VAX-11 F

VAX-11 F

DISKSUSE

U+032+ASET+MSG+DEST+DATA := TC:

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```
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                                                           VAX-11 F
-- Source Listing ----
                                -- 17-Mer-1983 17119139 -- DISKEUSE
      EERININ(EEOF+10+NELS+CANDIDATE+TARGETS+FILE);
      EFRADBINCEEDB (F+12+DETECTED+CANDIDATE+TARGET8+FILE)
      ) ;
      EERININ(EEOF+12+DFTECTED+CANDIDATE+TARGETS+FILE)
    ---<u>E</u> N∙i) •
 FEDET+5+NELS+PRE+BRIEFED+SDI+ET:
      3FGIN
     - EFBOOSIN(EE90S(F+10+NELS+CANDIDATE+TARGETS+FILE));
      EFRINIA (EEOF+10+NELS+CANDIDATE+TARGETS+FILE);
      EE800SIN(EE90S(F+21+NELS+PRE+BRIEFED+SOI+FILE));
      EFRININ(EEOF+21+NELS+PRE+RRIEFED+801+FILE)
      END;
 FERETHRANELSAPREABRIFFEDAADIAET:
EE80DSIN(EE9DS [F+10+NELS+CANDIDATE+TARGETS+FILE]);
      EESININ(EEOF+10+NELS+CANDIDATE+TARGETS+FILE);
      EFADURIN(FEADS(F+20+NELS+PRE+RRIEFED+401+FILE1)1-
      EERIMIN(EFOF+20+NELS+PRE+BRIEFED+A01+FILE)
      END:
-- EECET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET:
      BEGIN
      EERDUSIN(EE90S(F+10+NELS+CANDIDATE+TARGETS+FILE)):
      <u>EFUINTHCEFOF+1G+NFLS+CANDIDATF+TARGETS+FILE)</u>
      END:
 FERET+2+"ELS+E"ITTER+GPUHND+TRHTH+ET:
     FGIA
      EESPOSIN(EE9DS(
      F+14+MELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE1);
    EEGF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE)
      Ent);
FERETATALL SANEATHERALT.
      REGIN
      EEEDUSIM(EE908(F+26+NELS+WEATHEP+CONDITIONS+FILE1);
    EFSININ(EFOF=26+NFLS+WEATHER+CONDITIONS+FILE)
      FUD:
 FEORTHS+"ELS+FLIGHT+FT:
    -- &E&11
      EFENDAL* (EE9US (F+06+FLIGHT+PROFILE+FILE));
      ETHININ(EEOF+06+FLIGHT+PROFILE+FILE);
      &EAGUSIN(FERUS (FARTAPLATFORMACONTROLAFILEI);
      FERINTM (EFOF+27+PLATFORM+CONTROL+FILE)
      5 MB:
. ELDET-MANELSAFREGUENCY-SCAN-FT:
      MEGTA
      EFROLSI*(FERRE [FELRENELS+FREQUENCY+SCAN+FILE]);
     ... EFEINIM(EEOF+19+MELS+FREUUENCY+SCAN+FILE)
 FEARTHIN' ET SHEMISSIO" +THREATHET:
     L BEGIN
      EFFOURTMERCHEN (FERUS (FET3ANELSEMISSIONATHREATATABLEAFILE)
      LEFHINIMIEFOF+13+NFLS+EMISSICN+THREAT+TABLE+FILE)
      E 16 1
 FERETHANNELS+VFHTCLE+CHAPARTERISTICS+ET:
      FFGTH
      EFF768I (FEGDS)
```

```
17-Mer-1983 17:19:39
    ----- Source Listing
                F+15+NELS+EMITTER+CHARACTERISTICS+FILE1);
               EEBININ(EEOF+15+NELS+EMITTER+CHARACTERISTICS+FILE)
                ENDI
          EEPET+11+DFTECTED+EMISSIONS+DD+TDOA+ET:
                HEGIN
                EFANUSIN(EE9US [
                F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE1):
                LESININ(
                EFOF+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE):
                EFBODSIN(FE90S [F+18+NFL8+ESTIMATED+GROUND+TRUTH+FILE
                3-) #
                EF8ININ(LEOF+18+NFLS+ESTIMATED+GROUND+TRUTH+FILE)
                E it. ?
          FEDET+12+DFTECTED+EMISSIONS+COARSE+ET:
                REGIN
                LEBODSIN(FE9DSI
                F+17+NELS+ESTIMATFO+EMITTER+PARAMETERS+FILE]);
                EFRINING
                EFOF+17+4FLS+ESTI"ATED+EMTTTER+PARAMETERS+FTLE);
                EFRACOSIA (FERROS [FET8 HHELS HEST IMATED + GROUND + TRUTH + FILE
                EFBININ(EFOF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE)
               END:
          FEORTH13+DFTECTED+FUTSRIONS+FINE+ET:
                SEGIN
                KEADUSIN(FE90St
                F+17+HELS+ESTIMATED+EMITTER+PARAMETERS+FILE1);
                FEATNING
                EEOF+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE):
                EEBMOSIM(EE908[F4184NELS+ESTIMATED+GROUND+TRUTH+FILE
                EFBTHIN (EFOF+18+AFLS+FSTIMATED+GROUND+TRUTH+FILE)
                ENO
          END
     END (* FERIMIN *);
PROCEDURE FEASFTHP:
     VAR EEGLIEETOSIST;
   EFYA, FERRI ALFA; FERC, FERDI INTEGER;
     BEGIN
   DATE (FEGA); IF EFGA(1) = ' ' THEN FEGD ; = 1 ELSE EEGD := 0;
   FOR EFOR: 1 TO A DO FERWATE, MARTE (FERCI: FERA (EFOCHELOD);
   EEXOATE.AALFHIRA; TIMF(EEGA); FOR EEGCI#1 TO 8 DO EEXTIME.AASTRI
EEGCI:#EEGAILEGC+EEGO); EEXTIMF.AALEN:#8; EERUNID.AASTRI#
   ISIMULATOR+FXECUTION+PEFAULT+IU
   EFRUNTO.AALFN:=30:
                             FEGVPF: TRUE;
                .AASTR :=
     EEGRATE
  117414-83
              .44LEN := UM;
     EFGRATE
     EEGT14E
                .AASTE :=
  115:48:0A
                .AALEN IS OR!
     EEGTI"E
     EESTMID
                .AASTR IE
  ISINGLATOR/TESTADEFAULTATO
     EFSTMIO .AALEY IR 25;
EFSOSTEFLY USI OSHIMDIRFEADATISFT;
     CLUCK+TIME := 0.0;
```

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VAX-11 F

DISKSUSF

Source Listing

```
DEUNTHASPHACCHX+DATA 13
                         0.0;
D+008+ASP+ACC+Y+DATA 1=
                         0.0;
D+009+ASP+ACC+Z+GATA := 0.0;
U+012+ASP+LATITUDE+DATA := 0.0;
D+017+ASP+LONGITUDE+DATA IM
De018eASP+PITCH+DATA := 0.0;
D+019+ASP+ROLL+CATA := 0.0;
U+021+ASP+TIME+DATA #= 0.09
0.0; 0+025+45P+YAN+UATA := 0.0;
Deopeecartoemapesectenumenata := 0:
DEDGIENELSEERERUENCYESCANEDATA 1= 0.01
EE905 (F+01+9kIDGE+LOCATIONS+FTLE).DSKIND:=EE6DATASET;
EE908 (F+)1+3RTOGE+LOCATIONS+FILE) .CLASS: #EE1FILCL:
EEADS (F-01+RRI)GE+LOCATIONS+FTLE] .DSTYP:=
F+01+9RIDGE+LOCATIONS+FILE;
EE9DS (F+01+RRIDGE+LCCATIONS+FILE) . INTYP:#
EFUF+01+B#INGE+LOCATIONS+FILE:
EEBOS (F+02+CARTO+MPDATE+FILE) .DSKIND:=EE6DATASET;
EE908 (F+02+CARTO+UPRATE+FTLF) .CLASS: #EE1FILCL;
EF908(F+02+CARTO+UPDATE+FILE).USTYP1=F+02+CARTO+UPDATE+FILE1
EE908 FF+02+CARTO+UPDATE+FTLF].INTYP:=EE0F+02+CARTO+UPDATE+FILE
EFFOS (F+03+ClTY+LOCATIONS+FILF) . OSKIND: EFFODATASET;
EF9: SIF+U3+CITY+LCCATIONS+FTLF1.CLASS:=FE1FILCL:
EERISIF+33+CITY+LOCKTIONS+FTLF1.DSTYP1=
F+03+C1TY+LOCATIONS+FILE;
EE9DS (F+03+C1TY+LOCATIONS+FTLF].INTYP:=
EFOF+03+CITY+LUCATIONS+FILE:
EEADS (F+04+CMDRS+DATA+TO+UPDATE+FILE) .DSKIND: EE6DATASET;
EF90S(F40.4CAORS+DATA+TO+UPDATE+FILF).CLASS:=FE1FILCL:
EF978 FF+04+CHORS+DATA+TO+097ATE+FILE].OSTYP:#
F+04+Cmf.RS+DATA+TO+NPDATE+FTLF;
EFYDS (F+QU+Ch DRS+DATA+TO+UPDATE+FILE) . INTYP:=
EFOF+04+CMUPS+DATA+TO+UPDATF+FILE:
EE9DS IF+05+FEASTHLE+ACTIVITY+ARFA+FILE) . DSKIND: #EE6DATASET;
FF905 [F+05+FE+STBLE+ACTIVITY+4RFA+FILE].CLASS:=EE1FILCL:
EFUNS IF+ 05+FEASIBLE+ ACTIVITY+46 A+FILE1 . DSTYP:#
F+OS+FEASINLE+ACTIVITY+AREA+FILF;
EF9081F+05+FE4STHLE+ACTIVITY+ARFA+FILE1.INTYP:=
EFOF+05+FFASIALE+ACTIVITY+APEA+FILE:
EE9DS (F+AA+FLIGHT+FFOFILE+FILF) . DSKIND: #EE6DATASET;
EF9~5 [F+06+FLIGHT+PFUFILE+FILF] .CLASSI#EE1FILCL1
EFACS [F+06+FLIGHT+PHOFILE+FILE] .USTYP1#
F+OA+FLIGHT+PROFILE+FILE;
EF908 (F+06+FLIGHT+PROFILE+FILE) .INTYP:=
EFOF+16+FLIGHT+PROFILE+FILE+
EF POS (F+U7+GHOUP+TARGFT+LOCS+FILE) .DSKIND:#FEADATASFT;
EFADS IF+07+GHOUP+TAPGFT+LCCS+FILE3.CLASSI=EF1FILCLI
EF 30S (F+07+GROUP+TA9GET+LOCS+FILET.DSTYP:#
F+07+GHOUP+TARGET+LOCS+FILE;
EF908 FF+07+GROUP+TARGET+LOCS+FILE).INTYP:#
EFOF+97+GRUUP+TARGET+LUCS+FTLF;
EF 90S (F+ J84H+PSO+DATA+FTLF) . DSKIND: #EF6DATASET)
EFANS (F+3 4+4YPSO+7ATA+FTLF].CLASSI#EE1FTLCLI
EF90S [F+U3+HYDSD+DATA+FILF] .USTYP:=F+08+HYPSD+DATA+FILE!
EF 95 (F+09+44PSO+NATA+FTLF) . INTYPIRFEOF+09+HYP80+DATA+FILE;
EFORS (F+09+ MARSMALLING+AREAS+FILE) . DSKIND: #FE6DATASET:
```

```
EE908 (F+09+MARSHALLING+AREAS+FILE) .CLASS:=EE1FILCL;
EF 908 (F+)9+MARSHALLING+AREAS+FILE) . DSTYP1=
F+09+MAR !: ALLING+AREAS+FILE:
EE905 (F+09+MARSHALL ING+AREAS+FILE) . INTYP:=
EEOF+09+MARSHALLING+AREAS+FTLE;
EFODS (F+10+NELS+CANDIDATE+TARGETS+FILE) .DSKIND: #EE6DATASET;
EE 405 (F+10+ VELS+CANDIDATE+TARGETS+FILE) .CLASS: #EE1FILCL:
EEPOS (F+10+HELS+CANDIDATE+TARGETS+FILE), DSTYP:=
F+10+NELS+CANDIDATE+TARGETS+FILE;
EE905 (F+10+NELS+CANDIDATE+TARGETS+FILE) .INTYP:=
EFOF+10+NELS+CANDIDATE+TARGFTS+FILE;
EF90S1F+12+DETECTED+CA4DIDATE+TARGETS+FILE].DSKIND:#EE6DATASET
EE9DS (F+12+DETECTED+CANDIDATE+TARGETS+FILE) .CLASS: #EE1FILGL;
EF90S(F+12+DETECTED+CANDIDATE+TARGETS+FILF).DSTYP:
F+12+DETECTED+CANDIDATE+TARGETS+FILE;
EE9DS (F+12+DETECTFU+CANDIDATE+TARGETS+FILE) .INTYPI=
EEOF+12+0FTFCTED+CANDIDATF+TARGFTS+FILE;
EF905 (F+13+MELS+EMISSION+THPEAT+TABLE+FILF1.DSKIND: #EE6DATASET
EE9DS (F+13+NELS+EMISSION+THREAT+TABLE+FILE) .CLASS:=EE1FILCL:
EFONS (F+13+NELS+EMISSIUN+THREAT+TABLE+FTLE).DSTYP:=
F+13*NELS*EMISSIUN*THREAT+TABLE+FILE;
EE9DS (F+13+NELS+EMISSION+THPEAT+TABLE+FILE).INTYP:#
EFOF+13+NELS+FMISSION+THRFAT+TABLE+FILE;
EE9nS(F+14+HELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE).DSKIND:=
EF6PATASET;
EE905 (F+10+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE).CLASSI=
LF1FILCL;
EFYNS(F+14+YELS+EMITTEK+ACTIVTTY+GROUND+TRUTH+FILE).DSTYP:=
F+14+MELS+EMITTFR+ACTIVITY+GROUND+TRUTH+FILE:
£E90SIF+LU+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE).INTYP:=
EEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE;
EF905 [F415+NELS+EMITTER+CHAPACTERISTICS+FILE] .DSKIND:=
EEDDATASET
EE90S(F+15+"ELS+EMITTER+CHAPACTERISTICS+FILE).CLASS:=EE1FILCL:
EF 908 (F+ 15+16LS+EMITTER+CHARACTERISTICS+FILE) . OSTYP:=
F+15+NELS+EMITTER+CHARACTERISTICS+FILE;
EF908 IF+15+NELS+EMITIFR+CHARACTERISTICS+FILE1.INTYP:#
EFOF+154NELS+FHITTER+CHARACTERISTICS+FILE;
EF9DS (F+16+NELS+EMITTER+FILF).DSKIND: #EF6DATASET;
EEPOS (F+16+VELS+E* ITTER+FTLE) .CLASS:=EE1FTLCL:
EF 908 (F+1++NELS+EMITTER+FILE) .DSTYP: #F+16+NELS+EMITTER+FILE;
EE 908 (F+16+MEL8+EMITTER+FILE).INTYP:=EE0F+16+NEL8+EMITTER+FILE
EE9nS(F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE).DSKIND:=
EF 6CATASET:
EF90SfF+17+MELS+ESTIMATFD+EMITTFR+PARAMFTERS+FILE1.CLASS:=
EFIFILCL:
EEYDS (F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE1,DSTYP1#.
F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE;
EF90S (F+17+NELS+ESTIMATEO+EMITTER+PARAMETERS+FILE).INTYP:#
ELOFEL ZENELSESTIVATEDE EMITTER PARAMETERS FILE:
EFANS (F+19+%ELS+ESTIMATEO+GRUUND+TRUTH+FILE).DSKIND:#
EFORATASET;
FF405 FF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE1.CLASS: #ER1FILCL:
EFONS (F+1A+VELS+ESTIMATED+G90UND+TRUTH+FILE).DSTYP1=
```

```
F+10+MELS+ESTIMATED+GROUND+TRUTH+FILE:
 EFONS (F4184NELS4ESTIMATED4GROHND4TRUTH4FILE) .INTYP18
 EFOF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE;
 EFORS IF+19+ HELS+FREQUENCY+SCAM+FILET . PSKIND: #EE6DATASET;
 EFONS IF + 10+MEL S+FREDUENCY+SCAN+FILET - CLASSIBEFIFILEL + ---
 EFONS IF+19+"ELS+FFERUENCY+SCAN+FILET.DSTYP:=
 F+10+MELS+FRE JUENCY+SCAN+FILE;
 EFOILS (F+10+HEL S+FREQUENC Y+6CAH+FILE) -INTYP:=------
 LFOF+19+NFLS+FREQUENCY+SCAN+FILE:
 ER90S !F+20+NELS+PRE+BRIEFED+A0I+FILE1.DSKIND:#EE6DATASET;
 EF9ns(r+2n+4EL3+PPE+8PIFFFD+ANI+FILE).CLA88:#EE1FILCL:
 EE90S 1F+20+MELS+PRE+BRIEFFD+A0I+FILE] .DSTYP:=
 F+20+MELS+PRE+BRIEFED+ADI+FILE;
 EEGOS (F+20+NELS+PRE+BRIEFFD+ADI+FILE), INTYP:
 EFOF+20+NELS+PRE+RRIEFED+A01+FILE;
 EF905(F+21+VELS+PRE+BRIEFFD+S01+FTLE).DSKIND:#EE6DATASET;
 EERAS IF+21+LELS+PFE+BRIEFED+SOI+FILF) .CLASSI=EEIFILCL1
 EF90S (F+21+MELS+PRE+BRIFFFD+S01+FTLE) .DSTYP:#
 F+21+HELS+PPE+BRIEFED+SNI+FILE;
.. EF 90S (F+21+HELS+PRE+BRIEFFD+S0I+FILE) .INTYP1=
 EFOF+21+NFLS+PRE+BRIEFED+SOI+FILE;
 EE90S (F+24+NELS+TDOA+DD+FILE) .DSKIND: #EE6DATASET)
 EFONS IF+24+NELS+TOUA+DO+FTLET, GLASSIBEEIFILGL+
 EEYNS [F+24+MELS+TD04+DD+FTLE].DSTYP:#F+24+NELS+TD0A+DD+FILE;
 EF90S1F+24+ 4ELS+T004+00+FILE].INTYP:=EE0F+24+NEL8+T00A+DD+FILE
 EE90S [F+25+NELS+TYPED+EMITTFR+REPORT+FILE] .DSKIND: EE6DATASET;
 EE9NS (F+25+NELS+TYPED+EMITTER+REPORT+FILE) .CLASS: mEE1FILCL;
<u>EEGOS (#+25+WELS+TYPED+EMITTFR+HEPORT+FILE),DSTYP:</u>
 F+25+MELS+TYPFD+EMITTER+RFPORT+FILE;
 EC 30S IF+25+NELS+TYPED+EMITTER+PEPORT+FILET.INTYP:
- EFOF+25+HELS+TYPED+EMITTER+REPORT+FILE+
 EF9DS (F+26+NELS+WEATHER+CONDITIONS+FILE) DSKIND: WEE6DATASET;
 EF905 (F+26+NELS+WEATHER+CONDITIONS+FILE) .CLASS: #EE1FILCL;
EEPOS (F+26+NELS+NEATHER+CONDITIONS+FILE) 108TYP1=
 F+26+bels+WEATHER+CONDITIONS+FILE;
 EF9DS (F+26+"ELS+"FATHER+CONDITIONS+FILE).INTYP:#
EEOF+26+NFLS+WEATHER+CONDITIONS+FILE+
 EE9NS (F+27+PLATFORM+CONTROL+FILE) . DSKIND: #EE6DATASET;
 EF905[F+27+PLATFORM+CONTROL+FILE].CLASS*#EE1FILCL#
 EFORSIF-27-RLATFORM-CONTROL-FILEL-DSTYPIS
 F+27+FLATFORM+CONTROL+FILF;
 EE905 IF+27+PLATFORM+CONTROL+FTLE3.INTYP:=
EFOF#27#PLATFORM#CONTROL#FILE
 EF905 (F+23+PRIMARY+ROADS+FILE) .DSKIND: EEE6DATASET;
 EE9NS(F+2°+PRIMARY+ROADS+FILE),CLASS:#EE1FILCL;
EFORS (F+2P+PRIMARY+ROADS+FILE) +DSTYP: #F+2R+PRIMARY+ROADS+FILE;
 EFONS (F+2P+7RIMARY+ROADS+FILE1 .INTYP:=
 EEDF+23+PFIMAPY+ROADS+FTLE:
EF95S1F+29+RAILROAD+LOCATIONS+FILE1.DSKIND:=EE4DATASET;
 EEGNS (F+2G+PAILROAD+LOCATIONS+FILE) .CLASS: #EE1FILCL;
 EE905 FF+29+RAILROAD+LOCATIONS+FILE1.DSTYP:#
 F+29+RAILECAD+LOCATIONS+FILE:
 EF905 (F+29+RATLROAD+LOCATIONS+FILE) . INTYP:=
 EFOF+29+RAILROAD+LOCATIONS+FILE;
 EE905 IF+30+91VEP+LOCATIONS+FILE1.DSKIND:=EE6DATABET;
 EF9NS (F+3C+PIVEP+LOCATIONS+FILE) .CLASS:=EE1FILCL;
```

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     .....Source Listing
         EF905 (F+3C+PIVER+LOCATIONS+FILE) . DSTYP:#
         F+30+RIVER+LOCATIONS+FILE+
         EE90S (F+30+PIVER+LOCATIONS+FILE) . INTYP:
         EFOF+30+RIVER+LOCATIONS+FILE:
        EFROS (F+31+SECONDARY+ROADS+FILE) DSKINDISFE6DATASETI
         EE905 (F+31+SECONDARY+ROADS+FILE) .CLASS:=EE1FILCL;
         EFORS (F+31+SECONDARY+ROADS+FILE) . DSTYP:
        . Fastaseconcaryeruausefile.
         EEPOS (F+31+SECONDARY+ROALS+FILE) .INTYP:=
         LEOF+31+SECONDARY+ROADS+FILE;
        EFODS (FA32ASENSORADRBITAMODSAFILE) DSKINDTHEEADATASETT .....
         EEGOS (F+32+SENSOR+OPRIT+MODS+FILE) .CLASS:#EE1FILCL;
         EFYNS (F+32+SENSOR+UPBIT+MODS+FILE) .DSTYP:#
     ... FA324SENSCRAG2BITAMODS4FILE;
         EE90S (F+32+SEMSOR+ORBIT+MCDS+FILE) . INTYP:
         EEOF+32+SFNSOR+ORRIT+MODS+FILE:
      ____ERDS (FAJJASE NSORAPL ATFORMAL OCATIONAFILE) DSKIND:#EEADATASET!
         EE908 IF+33+SENSOR+PLATFORM+LUCATION+FILE] .CLASSIMEE1FILCLI
         ERGIS 1F4334SEASOR4PLATFORM4LOCATION4FILE 1. DSTYP1#
     - -- FASTARENSCHAPLATEORMALOCATIONAFILE-
         EF90S (F+33+SENSOR+PLATFOR4+LOCATION+FILE).INTYP1=
         EFOF+33+SENSOR+PLATFORM+LOCATION+FILE;
     EFONS IF + 34 + SENSOR + STATUS + FILE 1 , DSKIND 1 = EE ADATASET 1
         EE975 (F+34+SENSOR+STATUS+FILE1 .CLASS:#EE1FILCL;
         EF90S(F+34+SE4SOR+STATUS+FILE).OSTYP:=F+34+SENSOR+STATUS+FILE;
    EE9DSIFASUASENSORASTATUSAFILET INTYPER
         EEOF+34+SENSOR+STATUS+FILE:
         EE ?ns (EF1F1LCL) . DSKIND : #EE6CLASS;
    EEONS (EETF ILCL) OSTYP: EEE EE LE (LCL)
         EF90S (EF1F1LCL) . BOC :=F+01+BRINGE+LOCATIONS+FILE;
EF90S (EF1F1LCL) . EOC :=F+34+SENSUR+STATUS+FILE;
    EE905 (EF 1F (LCL) COS := EE1F (LCL)
         EF905 (EF1FILCL) .NFW :=FALSE;
         EE90S (INTO+MELS+SENSOP) . DSKIND: = EE6DATASET;
      EFGOSII: TO MELSASFNSORI .CLASS: EFELINTOL;
         EEANS (I' 17- GELS+SENSOR) . DSTYP:=INTO+NELS+SENSOR;
         EFONS (INTO + VELISASENSOR) . INTYPIREEINDING
<u>FE91'I'MA'LHE01+ES+\ELSeunlTeAND+ENVIRONMENT+DATA6MSG+INLAASTRIR</u>
*INTO+*ELS+SENSOF
EEQITTNAMI 14614ES4NELS4UNITHAND4ENVIRONMENTHDATA4MSG4IN
1 .AALE ... 164
FEOINTEFF ("+01+ES4NELS4U"IT+AND+ENVIPO"MENT+DATA+MSG+IN
1:=1'TO+UELS+SFNSOF;
EEQI TMAT (TEO2+ LL SECARICEUPCATES MSCEJA) .AASTRIR ....
                                                                 1,
*INTO+MELS+SENSOR
FEGINTMAM [M+A2+NFLS+CARTO+UPDATES+MSR+IN
1. / AL E :: 15:
FEOT TOFC THEN 2011 LEGENT OF LIPPATES OF STORM
1:=[ .TO+4F| S+SF .SOP;
EEGITI AN LIGOSEGELSECHMAANDERSGREUUIREMENISGMSGEINI.AASIRIE.....
ITATANEL SASENSOR
FEOI' THAM (HEAZENFLEECOMMANDERSEREULIREMENTSEMSGEIN
1.AALEHIE 10:
FEOT TEFET TO AN ELECTE OF TANCETS OF THE TEM TEM SECTION
1:=I: TO+"F( $+$F: SOF;
FEOT IT AV C' + "4+ VFL S+MOCIFIED+TASK+MSG+INT . AASTRIE
"INTSHIELS+SENSES
```

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VAX-11 F

Source Listina

```
EEGINTNAM IM+04+NFLS+MODIFIFD+TASK+MSG+IN
---- 1 .AALEN:= 16;
  EEGINTRFC [M+04+NFLS+MUDIFIED+TASK+MSG+TN
   TI=IMTO+NELS+SENSOS;
  EEGITTMAM [MAGGANFLSADRRITAMODIFICATIONSAMSGAIN] . AASTRIE
   *INTOFMELS+SENSOR
   FEGINTMAN IN +00+NELS+OPRIT+ 1001FICATIONS+MSG+IN
  1.44LE" += +6:
   SEGIATRECIM-06+RELS+DRGIT+MODIFICATIONS+MSG+IN
   I:=I"TO+NELS+SENSOR;
EEGI-TNA4[M4084NFLS4PHTURITIZED4SENSOH4UINECTIONS4M8G4IN].AASTR:
   INT HELSESPASOR
   EE911T.AMEM+00+NFLS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN
   T. AALEHIE 16:
   EE91' TRECIMENSELSERRORITIZED+SENSOR+DIRECTIONS+MSG+IN
   1:=InTOenFl SeSFNSOF:
   EEQIMTMAM (MAAQAAREESADEQUESTEDASEVSORADATAAMSAATI), AASTRIB
   *INTO+FELS+SENSUE
   REGINTS AV ("HONGHAFL SHREQUESTED 43ENSOR+DATA+"SOLIN
   1.44LE-1= 16;
   EE91"TAFC [M+09+NFLS+PE NUESTED+SENSOR+DAT4+MSG+IN
   1:=I* TO+ WEL 3+SE :808;
   FEGINTHAM (NOTSOTOANGOLOSTURONEL SONSGOIM) . AASTRIE
   *INTO+*ELS+SERSUP
   FE91111A-11+15+1+410+C+STUP+HELS+N9G+IM
   1 . AALE' := 10:
   EF 911 THEC (M+15+T+AND+C+STOF+MELS+MSG+IM
   1:#INTO+NELS+SF4SOR;
            EE905!TD#TIHING+AND+CONTROL#FRUM+NELS1.DSKIND:=EE6DATASET:
            EF INSTITUTION THE CONTROL + FOUM + MELSI, CLASS: EFFINTEL;
            EF YES TICETE - ING + AND + CONTROL + FROM + MELSI - DSTYP :=
             INSTITUTES A TOSCONTROLS FROM SNELS;
            EF 90S TTO+ TIMING+AND+CONTROL+FROM+MELSI.INTYP:=EE1NOIN:
   FE9101744 E1+05+NELS+NO :+SURVEILLANCE+TARGET+REPORTS+MSG+OUT].AASTRIB
   'TOOTIVING.ANDECONTROL .FROMODELS
   EE91 T14 11 4054 VELSELGHESUPVEILLANCEETARGETEREPORTSEMSGEDUT
   1.441.t := 31;
   EE91:1PFC::+45+WFLS+10:4SURVEILLANCE+TARGET+REPORTS+MSG+OUT
   1:=IC+TIMING+ANG+CONTROL+PRUM+NELS:
   FEGITTAMETHANGHANTLSAPLATFORMALOCATTONAPEPORTSAMSGAOUTI.AASTR:=
   *TOOTI *INGGANDOCONTROLOFROMONELS
   FERITTMATTIMATEMENT SERVENTERMENCERTION FREPORTS FMSG FOUT
   1. AALE := 31;
   FERILIBECTHECTERFUSERLATEORMELOCATIONEREPORTSEMSGEOUT
   1:=TP+TIMING+AND+CDNTROL+FPOM+NELS:
   FEGINTAN [ 4+10+NFL S+SENSOR+RFDHESTS+MSG+DUT] . AASTR:=
   *TOOTININGWAND CONTROL OF ROHENELS
                                                                   ٠,
   EEGINT! A ! ["+10+NELS+SENSOR+REQUESTS+YSG+OUT
   1.44LE### 31;
   FERITTER CONTRACTOR STRANDERS TRANSCADUT
   1:=TO+TIMING+A JU+CONTROL+FROM+NELS:
   FEGINTMATEMENTALSERE SOMESYSTEMESTATUSEMSGEOUTS. AASTRIB
   TOOTI INGOANUOCCUTROLOFAUNONELS
   FEGITTMAH ["+11+ "FLS+SE "SOR+SYSTE"+STATUS+MSG+DUT
   1.44LEN1= 31:
   EEGINTOFC [1+11+NFLS+SE"SOH+SYSTEM+STATUS+USG+UUT
   1:=TG+TIMI VG+AMG+CCM TROLFFROM+NELS:
```

```
EEGINT A" ("+12+NELS+SURVEILLANCE+TARRET+REPORTS+MSG+OUT] .AASTR:=
* TO+TIMING+AND+CONTROL+FROM+NELS
EEGINT' AM LM+! 2+NFLS+SURVFILLANCE+TARGET+REPORTS+MSG+OUT
1.AALE*:= 31;
EEGINTRFC (Y4124NELS48URVEILLANCE4TARGET4REPORTS4M8G4OUT
1:=TO+TIMING+AND+CONTROL+FROM+NELS;
EE91' THAT [M413+NFLS+TASKING+RESPONSES+MSR+OUT] . AASTRIB
*TOOTIMING+AND+CONTROL+FROM+NELS
                                                                  1 ,
FE91*1*AM [M+13+NFLS+TASKING+RESPONSES+MSG+OUT
1.AALE : 31;
EERITTEFC (Me 13 ANFLS ATASKING ARESPONSES AMSGAOUT
1:=10+114ING+AND+CONTROL+FROM+RELS;
FEOI TYAT ( *+14+ "FLS+TRACK+"ESSAGE+"SS+OUT] . AASTRIE
*TOATINING*AND*CONTROL*FROM*DELS
FEGINTHAM ING 144 NF L SETHACKEMESSAGEEMSSEQUT
1.44Lt: := 31;
FERINTREC [Net 4+NEL SETRACK+MESSAGE+MSGEOUT
1:=TO+TIMING+AND+CONTROL+FROM+NELS:
         EF 905 FEE 11 ATOLT . USATHE 1=EF6CLASS;
         EF VOS TEETINTOLI, DSTYP: = EETINTOL!
         EF955 FEF1INTCL) &OC :=INTC+NFLS+SENSCH;
EE955 FEF1INTCL) &FCC :=TC+TTMTNG+AND+CONTPOL+FROM+NELS;
         EE905 [EF1 INTOL] . EOC
         EF 90S [EF1] TOLL OF := FE1] TOLE 
EF 90S [EF1] TOLL OF := FALSE;
         EF90S1ET+10+6000NC+SHACOUTNG+CANDIDATF+TARGETS+ET1.DSKINDI#
         ECODATASET:
         EFROSTET+10+GPUDNO+SHADOWTNS+CANDIDATE+TARGETS+ET1.CLASS:=
         EC+1+MELS+DETECTABLE+EMISSION+BREAKOUT+EC;
         FEYOS LETHIG+GROUNC+SHADOWING+CANDIDATF+TARGETS+ET1.DSTYP:=
         ET+10+GRULMO+SHADOATMG+CAMUTUATE+TARGETS+ET;
         EFPOSIFT+1U+GFOUND+3HADDHING+CANDIDATE+TARGETS+ET].INTYP:=
         EFOFT ID+GROUND+SHADONING+CANDIDATE+TARGETS+ET;
         ## 45 STET+5+ HELS+PRE+BRIEFFD+SOI+ETI.DSKIND:#EE6DATASET;
         FF 90S (ET+5+ "ELS+PRE+BRIFFFD+S )I+ET] . CLASSIE
         EC+1+"ELS+DFTFCTABLE+EMTSSION+BREAKOUT+EC;
         FF ANS (ETARAMELISAMPEAGRIEFFDASRIAET) .USTYP:=
          ETASANELSANGEABRIFFFDASDIAET;
         ESBAS (ET+5+MELS+PRE+BRIEFED+SAI+ET].INTYP:=
         CEOFT+S+ VFLS+PRE+RHIEFED+SOI+ET:
         EF 303 TET+44 MELS+PRE+BRIEFED+ADI+ET1. USKIND: #EF6DATASET;
         EE95S (ET+8+ NELS+PRE+BPIEFFD+A91+ET) .CLASSIE
         SCHIP'ELS+DETECTABLE+ENTSSION+BREAKOUT+ECT
         EF 905 (ET+9+ NEL 5+PRE+BRIFFFD+A01+ET) . USTYP:=
         ET+3+1 ELS+PRE+dRIEFED+ADI+ET;
         EEGNS (ET+3+NELS+PPE+GRIFFED+AGI+ET].INTYP:#
         EEDFT+A+NELS+PHE+BRIEFED+401+ET;
         EEPPS (ET+9+SICNAL+NOISE+CANDIDATE+TARGETS+ET).DSKIND:
         EFBRATASET:
         EF90S(ET+9+S10VAL+NPISE+CANDIDATE+TARGETS+ET).CLASS:=
         EC+1+1ELS+LFTECTABLE+EMISSION+BREAKOUT+EC;
         EF908 TET+948IGNAL+NOISE+CANDIDATE+TARGETS+ETJ.DSTYP:
         ET+9+SIGNAL+NOISE+CANDIDATE+TAHGETS+ET;
         EE905 (ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET1.INTYPE
         EFORTHRESIGNAL CHOISF CAMUIDATE CARGETS CT;
         EF 905 FEC+1+WELS+WETECTABLE+EMISSION+BREAKOUT+EC1.DSKIND1
         EFSCLASS;
         EFYOS FECH! + VELS+OF TECTABLE + FMTSSION+GREAKOUT+ECI . DSTYP:
```

```
EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC;
 EE9DS (EC+1+NELS+DETECTARLF+FMTSSION+BREAKOUT+EC).BOC
 ET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET;
 EE9DS (EC+1+NELS+DETECTABLE+FMISSION+BREAKOUT+EC) . EOC
 ET+0+SIGHAL+NOISE+CANDIDATE+TARGETS+ET;
 EE90S(EC+1+NELS+DFTECTABLF+EMISSION+BREAKOUT+EC1.CDS
 EC+++ PELS+OFTFCTARLE+EMISSION+BREAKOUT+EC;
 EE9118 (EC+1+NELS+DETECTARLE+FMISSION+BREAKOUT+EC].NEW
                                                           :=FALSE:
 EE9DS (ET+2+NELS+EMITTER+GROUND+TRUTH+ET1.DSKIND:=EE6DATASET;
 EE9ns (ET+2+MELS+EMITTER+GROUND+TRUTH+ET).CLASS:=
 EC+2+NELS+SCENAPIO+EC+
 EF905 (ET+2+4ELS+E 1ITTER+GROUND+TRUTH+ET1.DSTYP:#
 ET+2+NELS+EMITTER+GROUND+TRUTH+ET:
 EF90S !ET+2+NELS+EMITTER+GROUND+TRUTH+ET3 .INTYP:
 EEOFT+2+NFLS+EMITTER+GROUND+TRUTH+ET;
 Et 905 [ET+7+461.5+4EATHER+ET] .DSKIND:#EF6DATASET;
 EFORS (ET+7+MELS+WEATHER+ET).CLASSIMEC+2+NELS+SCENARIO+EC)
 EEGr S (ET+7+NELS+WEATHER+ET) .OSTYP:=ET+7+NELS+WEATHER+ET;
 ETROSTET+7+NELS+HEATHER+ETJ.INTYP: =EEOET+7+NELS+WEATHER+ET;
 EE905 (EC+2+WELS+SCEWARIO+EC). DSKIND: =EE6CLASS;
 EF9DS [EC+2+NELS+SCENARIO+EC1.DSTYP:=EC+2+NELS+SCENARIO+EC;
 EE9DS (EC+2+NELS+SCENARIO+EC1.90C
 ETHRANELSAEMITTERAGROUNDATRUTHAET;
 ETANS TECH 2+ MELS+SCENARIO+FC1.EDC
                                    :=ET+7+NELS+WEATHER+ET;
 EE 905 FECH 24 NELS + SCENARIO + ECO 1 . NEW | I = FALSE | EE 905 FECH 24 NELS + SCENARIO + ECO 1 . NEW | I = FALSE |
 EE90S (ET+3+NELS+FLIGHT+ET) . OSKIND: #EE6DATASET;
 EF908 (ET+3+4FLS+FLIGHT+FT).CL488:=EC+3+NELS+T48KS+EC;
 EE9NS[ET+3+HELS+FLIGHT+ET]. NSTYP: #ET+3+NELS+FLIGHT+ET;
 ESSAS (ET+3+ MELS+FLIGHT+ET).INTYP:#EEOET+3+NELS+FLIGHT+ET;
 EFROS (ET+4+MELS+FREQUENCY+SCAN+FT) . OSKIND: #FE6DATASET;
- EF9DS (ET+4+NELS+FREQUENCY+SCAN+ET) .CLASS:=EC+3+NELS+TASK8+EC)
 EE9DS [ET+4+MELS+FREQUENCY+SCAN+ET] . DSTYP:=
 ET+4+NELS+FREQUENCY+SCAN+FT!
 EEGDS (ET+4+4ELS+FREQUENCY+6C44+ET) . INTYP:=
 EFORT+4+NELS+FREGUENCY+SCAN+ET!
 EFROS FEC+3+NELS+TASKS+EC1.DSKTHD:=EE6CLASS:
 EE9ns (EC+3+NELS+T45KS+EC), DSTYP: #EC+3+NEL8+TA8K8+EG;
 EFROS [EC+3+NELS+T4SKS+EC].BOC | 1=ET+3+NELS+FLIGHT+ET;
 REPOSTECHS+MELS+TASKS+ECT.ECC TEFT+4+NFLS+FREQUENCY+SCAN+ETS
 EE90S (EC+3+NELS+TASKS+EC) .COS : #EC+3+NFLS+TASKS+FC) EE90S (EC+3+MELS+TASKS+EC) .NEA : #FALSE;
 EE90S (ET+1+NE) SEEMISSION+THREATHET) . OSKIND: = EE6DATASET;
 EE9DS-LET-01-DELS-EMISSION-THREAT-ET)_CLASS:=EC-4-NELS-THREAT-EC
 EFORS [ET+1+MELS+EMISSION+THREAT+ET].DSTYP:#
 ETAIGNEL SCEMISSION THREATCET;
 EF90S (ET+1+MELS+EMISSION+THREAT+FT].INTYP:#
 EEOFT414NFLS+EMTSSION+THREAT+ET!
 EEGOS (LC+4+NELS+THREAT+EC) JOSKIND: =EE6CLASS;
 EF9DS [EC+4+NELS+THREAT+EC] .DSTYP: #EC+4+NELS+THREAT+EC;
 EF908 (EC+#+MELS+THREAT+FC) . ROC ##ET+1+NELS+EMISSION+THREAT+ET
 EEGNS TECH44-WELSATHREATAFC1.FOC :=ET+14NELSAEMISSIONATHREATAET
 EF905 FEC+4+MELS+THREAT+FC1.COS := EC+4+NELS+THREAT+EC:
 EFANS TECHNAMEL SATHREATAECT . NEW
                                   :=FALSE:
```

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                                                            VAX-11 F
      -- Source Listing -
                                 EE905 [EE91] .CIN :=NIL;
             EF908(EE91).INSTT:=EE6NULL
             END
    END (* FERSETHP *);
PROCEDURE FERNEAT (VAR FERINPIEETINPTR; EFRINSIEETINLST);
    VAR EESPI
                   :EE7INPTR:
        FEOF1, FEOF2 IEE7DSPTP1
    BEGIN
    CASE EEGINS OF
        EEINCINI -
         FEAF+01+9RIDGE+LOCATIONS+FILE:
             PEGIN
             *F*(EE921,EE0F+01+BRIDGE+LOCATION8+FILE);
             EFORIT. PSLNK I NIL
             END:
        NEW(EF9P1, EFUF+02+CARTO+UPDATE+FILE);
           EFORIT DSLMK 18 NIL
             ENDI
        FEOF+03+CITY+LOCATIONS+FILE:
             FETN
             NEW (EE 9P1, EEUF+03+CITY+LOCATIONS+FILE);
             EF9P1+. PSLNK := NTL
            ENG
        FEOF+04+CMDRS+DATA+TO+UPDATE+FILE:
             BEGIN
             NEW (EESPI, EFOF + OH+CMDRS+DATA+TO+UPDATE+FILE);
             EF9P1+.DSLNK := NIL
             END;
      FENFANSAFEASIELEAACTIVITYAAREAAFILE:
             REGIN
             NEw(RE9P1, RE0F+05+FFASIBLE+ACTIVITY+AREA+FILE);
             EEGDI+ UST NK += FIF
             £"0;
        FEOF+CA+FLIGHT+PROFILE+FILE:
            FEGIN
             MEW (EE9P1, EE0F+06+FLIGHT+PROFILE+FILE);
             EF9P1+.DSLNK := NTL
            END.
        FEOF+C7+GROUP+TARGET+LOCS+FILE:
             TIEN (EE921, EE0F+37+GROUP+TARGET+LOCS+FILE);
             EE9P1+.CSLNK :# NJL
   EEOK+OR+HYRSO+DATA+FILE+
             HFLTV
             MFW(EF9P1, EFOF+08+HYPSO+DATA+FILE);
            FF9P1+ DSLNK := NTL
             END;
        FEOF+09+ ARSHALLING+AREAS+FILE:
           "FRIEE9P1, EFOF+09+MARSHALLING+AREAS+FILE);
             EE9P1+. DSLAK := NTL
             E15;
        FEOF+10+46LS+CANDIDATE+TARGETS+FILE:
```

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                                                            VAX-11 F
                                   17-Mar-1983 17:19:39
                                                            DISKSUSE
 Source Listing
     EFGIN
     MEX (EFORI, EEUF+10+NFLS+CANDIDATE+TARGETS+FILE);
     EE9P1+.DSLNK IN NIL
     END:
EEOF+12+DETECTED+CANDIDATE+TARGETS+FILE:
     OFGIN
     4Em(LEGP1, EFOF+12+OF FECTEN+CANDIDATE+TARGETS+FILE);
     EE9P1+.DSLNK #= NIL
     ENDI
FEOF+13+NELS+EMISSION+THREAT+TABLE+FILE:
     DEGIN
     MEM(EE9P1, EEUF+13+NFLS+EMISSION+THREAT+TABLE+FILE):
     EFPPIT. DSLNK IS NIL
     ENG:
EEOF+14+NELS+EMITTFR+ACTIVITY+GROUND+TRUTH+FILE:
     BEGIN
     NEACEF 9P1,
     EFOF+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE):
     EEPPIT. OSLNK IE NIL
     €#Q;
FEOF+15+MELS+EMITTER+CHARACTERISTICS+FILE:
     BEGIN
     MENCEERP1, EROF+15+NELS+EMITTER+CHARACTERISTICS+FILE)
     RESPITABLISH IS NIL
     £ 46. $
FEOF+16+MELS+EMITTER+FILF:
     BEGIN
     MER (EE9P1, FEOF + 16+NFLS+EMITTER+FILE):
     EE9P1+. DSLNK := NTL
     EN0:
ELOF+17+NELS+ESTIMATEC+EMITTER+PARAMETERS+FILE:
     SEGIN
     DEW(EE9P1,
     LEGF+17+NFLS+ESTIMATED+EMT(TER+PARAMETERS+FILE);
     EESPIT. OSLAK := NIL
     E40:
EECF+18+MELS+ESTIMATED+GROUND+TRUTH+FILE:
     #EGIN
     12 A (EF9P1, EEOF+18+NFLS+FSTIMATED+GROUND+TRUTH+FILE);
     EFRPIT DSLNK IE NIL
     END:
FELF+19+11ELS+FPERUENCY+SCAM+FILE1
     JEGIN
     NEX (EE9P1, EE0F+19+NFLS+FHEUUENCY+SCAN+FILE):
     EE9P1+.OSI.NK IE NIL
     END:
FEMF+20+NELS+PPF+BRIFFFD+AMI+FILF1
     REGIN
     MEA(EE991, LEOF+20+NELS+PRE+BRIEFED+A01+FILE);
     EF9P1+.DSLNK := NIL
     EYD:
EEUF+21+NELS+PRE+BRIEFED+SOI+FILE:
     45 G 7 M
     tiFa(E59P1, EFOF421+NFLS+PHE+RRIEFED+80I+FILE);
     EFGPI+. DSLN4 18 NIL
     EMD;
```

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17-Mar-1983 17142151
                                                             VAX-11 F
                                    17-Mar-1983 17:19:39
                                                             DISKSUSE
- Source Listing
 FEOF+24+NELS+TDOA+DD+FILE:
      NEW (EE9P1, EE0F+24+NFLS+TDOA+DD+FILE);
      EF9P1+.DSLNK := NIL
      END:
 ELOF+25+NELS+TYPEU+EMITTER+REPORT+FILE:
      BEGIN
      NEW(EE9P1, EE0F+25+NEL8+TYPED+EMITTER+REPORT+FILE)+
      EE9P1+.DSLNK := NIL
      END:
 FERF+26+NELS+WEATHER+CONDITIONS+FILE:
      HEGIN
      NEW (EE9P1, EF0F+26+NELS+WEATHER+CONDITIONS+FILE);
      EE9PIT.DSLNK IM NIL
      END;
 EEOF+27+PLATFORM+CONTROL+FILE:
      SECTA-
      NF x (LE9P1, EEOF+27+PLATFORM+CONTROL+FILE):
      EF9P1+. DSLNK := NTL
      ENDA
 FEOF+28+PRIMARY+ROADS+FILE:
      HFGIN
      MEMCEFOP1, EEOF+28+PRIMARY+ROADS+FILE);
      EE9P1+. OSLNK := NTL
      EMP
 FEGF+29+RAILROAD+LOCATIONS+FILE:
      REGIN
      WEW (EE9P1, EE0F+29+RAILROAD+LOCATIONS+FILE);
      EF9P1+, OSLNK := NIL
       ENC:
 FLOF+30+RIVER+LUCATIONS+FILE:
      n+ GIN
      NEW (EE9F1, EFOF+30+RTVFR+LOCATIONS+FILE):
      EF9P1+ DSLNK := NIL
       ENDI
 FEOF+31+SECOHLARY+ROADS+FILE:
       HFGIN
       MEM (EE9P1, EFOF+31+SELONDARY+ROADS+FILE);
      EF9F1+ OSUNK IN NTL
      END:
 FEOF+32+SENSOR+GRATT+MODS+FILE:
      BELTN
      NEW (EE991, EFOF+32+SFNSOR+ORRIT+MODS+FTLE):
      EFAPIT DSUNK IS NTL
      E"D:
 FEOF+33+SENSOR+PLATFORM+LUCATION+FILF:
      REGIN
       NEW (EFOPT, EFOF+33+SENSOR+PLATFORM+LOCATION+FILE):
      EEGGIT.OSLAK IN NIL
      €401
 FEOF+34+SENSOR+STATUS+FILE:
      PEGIN
       HER (EF9P1, EFOF+34+SENSUR+STATUS+FILE) #
      FEGP1+.DSI,GK IS NTL
 "+O(+ER+MELS+UPIT+AND+ENVIROMMENT+DATA+MSG+INE
       PEGIN
```

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17-Mar-1983 17:42:51
                                                          VAX-11 F
-- Source Listing
                                  17-Mer-1983 17:19:39
                                                          DISKSUSE
      NEW (EE 9P1,
NEW (EE9F1);
      EE8KOPUSH(EE9DS(F+16+NELS+EMITTER+FILE), EE9F1+);
      EFBINDS(EE9F1+);
      EF9P1+.DSLNK := EE9F1:
      EF9F1+.NXTDS I= NIL
      E4D:
 M+02+NELS+CARTO+UPDATES+MSG+INE
      BEGIN
      HEX (EEPP1, M+O2+NELS+CARTO+UPDATES+M8G+IN);
      NEW (EF9F1):
      EF8KUPDSH(LE9DS(F+02+CARTO+UPDATE+FILE), EE9F11);
      EESINDS(EE9F1+);
      EF9P1+.DSLNK I= EE9F1;
      EF9F1+ . MXTDS IE NIL
      ENG+
 M+03+NELS+COMMANDERS+REUHIREMENTS+MSG+IN:
      BEGIN
      AEMIEERRI, M+03+NELS+COMMANDERS+REQUIREMENT8+M8G+IN);
      NE# (EE9F1);
      EE8KOPDSH(EE9DS(F+04+CMDRS+DATA+TO+UPDATE+FILE
      1,EE9F11);
      EFSINDS(EE9F11);
      EF9P11. PSLNK := EF9F1;
      EF9F1+ NXTDS := NIL
      END:
 M+04+NFLS+MUDIFIFD+TASK+MSG+IN1
    ... BEGIN
      NEW (EE9P1, M+04+NELS+MODIFIED+TASK+MSG+IN):
      NEFFEE9F1);
  LEBRUPOSH(EE90S(F+05+FEASIBLE+ACTIVITY+AREA+FILE
      1,EE9F1+);
      EF8INDS(EE9F1+);
 EE9P1+.D$LNK 1= EE9F1:
      EE9F1+ MXTOS := NTL
      ENDT
_ Med64NELS#ORBIT#HODIFICATIONS#MSG#IN:
      REGIN
      NEW (EF9P1, M+06+NELS+GRBIT+MODIFICATIONS+MSG+IN) 1
     .. NE . ( EE.9F1) ;
      EF8KOPDSH(EE9DSIF+32+SENSOR+ORBIT+MODS+FILE
      1,EE9F1+);
      EEBINDS(EE9F1+);
      EE9P1+.DSLNK 1= EF9F1;
      EF9F1+.NXTDS 1# NIL
     _ENC:
 M+08+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+INE
      BEGIN
    NEW (EE 9P1.
      M+OR+MELS+PRIOHITIZEU+SENSOR+DIRECTIONS+MSG+IN);
      NEW (EE 9F1);
      EEBKOPOSH(EE9DS (F+O5+FEASIBLE+ACTIVITY+AREA+FILE
      1,EE9F11);
      EF8TNPS(EF9F1+);
      EF9P1+.DSLNK 1= EF9F1;
      EE9F1+.NXTOS 1# NTL
                            E-76
```

```
17-Mar-1983 17:42:51
                                                          VAX-11 F
                              17-Mar-1983 17119139 DISKEUSE
···Snurce <u>l</u>.tatina:
      END:
 MARGARINE MARGAINE
      BEGIN
      HF + (EE9P1, M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN);
EERHOPOSH(EE9DS !F+07+GROUP+TARGET+LOCS+FILE
      1,EE9F1+);
   EFBINDS(EE9F1+);
      EE9P1+. DSLNK ## EE9F1;
      EF9F1+. NXTDS := NIL
--- ENC+
 M+15+1+A'10+C+STOP+NELS+MSG+IN:
     <del>~~E*(EE9P1,M+15+T+AND+C+STOP+NEL8+M8G+IN);</del>
      EF9P1+. DSLNK := NTL
      END:
- M+05+4ELS+NON+SURVEILLANCE+TARGET+PEPORT8+M8G+OUT:
      SEGIN
      NE*(EF9P1.
   - - *+05+NELS+NON+SURVETLLANCE+TARGET+REPORTS+MSG+OUT);
      WENCEEPF1):
      EE8KOPDSH(EE9DS [F+07+GROUP+TARGET+LOCS+FILE
    -- 1,EE9F1+)+
      EERINDS(EE9F1+);
      EF9P1+, OSLNK IN EE9F1;
     ECSFIT NATOS IN NIL
     END:
 M+07+NELS+PLATFORM+LOCATION+REPORTS+MSG+OUT:
    BEGIN
      NEW (EE9P1,
      M+07+MELS+PLATFORM+LOCATION+REPORTS+MSG+OUT);
     NEW (EE OF 1)
      EE8KOPDSH(EE9DS [F+33+SENSOR+PLATFORM+LOCATION+FILE
      1,EF9F1+);
   EEAINOS(EF.9F11);
      EE9P11.DSLNK :# EE9F1:
      EE9F1+.NXTDS := NIL
     E YC :
 M+10+NELS+3ENSOR+REQUESTS+MSG+OUT:
      AFGIN
   NEW (EF9P1, No 10 on EL SOSENSOROREQUESTSONSGOOUT);
      EE9P14.08LNK IE NIL
      E-10;
M+11+NELS+SENSOR+SYSTEM+STATUS+MSC+OUT:
      NEW (EE9P1, M+11+NELS+SENSOR+SYSTEM+STATUS+M8G+OUT);
      NF#(FE9F1);
      EEBKOPOSH(EE908 FF+34+SENSOR+STATUS+FILE), EE9F1+);
      EERINDS (EERF1+);
   - EE9P14.DSLNK IN EE9F14
      EEPF1+.NXTDS := NTL
      END:
MATERICA SURVEILLANCE ATARGET AREPORTS AMEGADUTE
      PEGIN
      NEWIEF9P1,
      *+12+NELS+SURVETLLANCE+TARGET+REPORTS+M83+OUT);
      NEW(EF9F1);
                         E-77
```

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17-Mar-1983 17:42:51
                                                         VAX-11 F
 --Source Listing
                            ____<del>17=Mar=1983 17:19:39</del>
                                                        DISKSUSE
      EF8KOPDSH(EE9DS(F+07+GROUP+TARGET+LOCS+FILE
      1,EE9F1+);
      EESINDS(EE9F1+):
      EE9P1+.DSLNK I= EE9F1;
      EFOFI+ NXTDS 12 NIL
      END:
 *+13+NELS+TASKING+RESPONSES+MSG+OUT:
     BEGIN
      NEW (EE9P1, M+13+NELS+TASKING+RESPONSES+MSG+OUT);
      EE9P11.DSLNK := NJL
 4+14+NFLS+TRACK+MESSAGF+MSG+OUT:
      REGIN
      NEW (EF9P1, M+14+NELS+TRACK+MESSAGE+MSG+OUT);
      NEW(EE9F1);
      EF8KOPDSH(EF9DS(F+02+CARTO+UPDATE+FILE), EE9F1+);
   EEBINDS(EE9F11)
      EE9P1+.DSLNK ## EE9F1;
      EF9F1+.NXTDS := NIL
     ENU .
 FEOET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET1
      BEGIN
  NEW (EF9P)
      EFOFT+10+GROUND+SHAPOWING+CANDIDATE+TARGETS+ET);
      MEX (EF 9F1):
   EF8KOPOSHCEE9DSCF+10+NELS+CANDIDATE+TARGETS+FILE
      ),EE9F1+);
      EESINDS(EE9F1+);
     EFOF1+ DSLNK := EFOF1:
      NE + (EE9F2);
      EFRKUPDSH(EF9PSIF+12+DETECTED+CANDIDATE+TARGET8+FILE
     1,EE9F2+);
      EEBINDS(EE9F2+);
      EF9F1+.NXTDS := EF9F2+
     EF9F1 := EE9F2 ;
      EE9Fit. NATDS := NJL
      ENOI
EEDET+S+NELS+PRE+BRIFFED+SDI+ET1
      PEGIN
      NEW(EE9P1, EE0ET+5+NFLS+PRE+BRIEFED+801+ET);
   NEW(EF9F1);
      EEEKOPOSH(EE9OS(F+10+NELS+CANDIDATE+TARGETS+FILE
      J.EE9F1+):
   CESINDS(EE9E11):
      LEGPIT. DSLNK 12 EF9F1;
      NEX(EF9F2);
   ERKOPOSH(EE90S (F+21+NELS+PRE+HRIEFED+SOI+FILE
      1.EF9F2+):
      EFSTNOS (EF9F2+);
  EFOFIT NYTOS 12 EFOF21
      EF9F1 := EE9F2 :
      EF9F1+. VXTOS := NTL
     Enge
 FERETHRAMELSAPPEABRIFFFDAARIAET:
      FFF(EF9P1, EF0ET+8+NFLS+PRF+BRIEFED+A01+ET);
      + F + ( E F 9 F 1 ) ;
                         E-78
```

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17-Mar-1983 17:42:51
                                                              VAX-11 F
                                     17-Mar-1983 17:19:39
--- Source Listing
                                                              DISKSUSE
        REBROPOSH (LEGOS (F+10+NELS+CANDIDATE+TARGETS+FILE
        1,EE9F1+);
        EFBINDS(EE9F1+):
        EF9P1+. OSLNK :# EE9F1:
        NF#(EF9F2);
        EFRYOPOSH(EF903 (F+20+NELS+PRE+BRIEFED+A0I+FILE
        1,EF9F21):
        EFEINDS(EF9F2+);
        EF9F1+.NXTOS 1= EE9F2;
        EE9F1 := EE9F2 :
        EF9F1+.MXTDS I= NTL
        EN0:
  FEGET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET:
        MEGIN
        MENCEEYP1, EEDET+9+STGNAL+NOTSE+CANDIDATE+TARGETS+ET)
        HEW(EEGET);
        EERHOPOSH (EE9NS IF + 10+NELS+CANDIDATE+TARGETS+FILE
        1,659F1+);
        EFSTNAS(LEGF11);
        EE9P1+.PSLNK := EF9F1;
        EF9F11. "XTES := NTL
        Entre
  FERETHRANELSAFMITTERAGPONNOATRUTHAFT:
        F 5 1 4
        MEACEFORE, EFORT+2+MFLS+EMITTER+GROUND+TRUTH+ET):
        NEW (EF9F1):
        EFAKOPLSHIFF9051
        F+14+NELSGEMITTER+ACTIVITY+GHOUND+TRUTH+FILE
        1,6E9F1+);
        EFSTWOS(EF9F11);
        ERGRIT. DSLAK IM ERGFI:
        EESFIT NETDS IN NTL
        £ 16 1
  FEOETATANELS+ AFATHERAET:
        MEN(EEMP1, FEOFT+7+NFLS+WEATHER+ET);
        ..F . (EF9F1);
        EFHKUPUSH(FE9DS IF+26+ LS+WEATHER+CONDITIONS+FILE
        1,EF9F1+);
        FF8TNOS(EF9F1+);
        EE991+.05LAK := EF9F1:
        FEGET . BATUS := NTL
        END:
  FEOFT+3+MELS+FLIGHT+FT:
       PFGIN
        KEN(LEGP1, EFOFT+3+NFLS+FLTGHT+LT);
        TFA(EFYF1);
        EFAKOPOSH(EE9PS(F+GA+FLIGHT+PRUFILE+FILE),EE9F1+);
        EFSINDS(EE9F11);
        EFOPITORINK IS EFOFII
        HERTEF9F21:
        EFAKOPLSH(EF9DS(F+27+PLATFORM+CONTROL+FILE), EE9F2+)1
        EFSTNOS(EE9F21);
        EF9F11. "XTUS 1= EF9F2;
        FE9F1 1= FE9F2 ;
        EF9F1+.MXTOS := NTL
```

```
17-Mar-1983 17:42:51
                                                             VAX-11 F
--- Source Listing
                                    17-Mar-1983 17:19:39
                                                           - DISKSUSE
      END;
 FEOET+4+NELS+FREQUENCY+8CAN+ET1
      BEGIN
      NEW (EF9P1, EEUET+4+NELS+FREQUENCY+SCAN+ET);
      NFH(EEQF1);
      EEBKOPDSH(EE9DS(F+19+NELS+FREQUENCY+SCAN+FILE
      1,EE9F1+);
      EESTADS(EE9F1+);
      EE9P1+.DSLNK := EF9F1;
      EE9F1+ NXTDS := NTL
      END
 REDET+1+ LELS+EMISSION+THREAT+ET:
      MEGIN
      AE#(LEGP1, EFOET+1+NELS+EMISSION+THREAT+ET);
      NEW (EE 9F1);
      EFSKOPDSH(EE9DS [F+13+NELS+EMISSION+THREAT+TABLE+FILE
      1, FF9F1t) +
      EFSINDS(EF9F1+);
      EE9P1+.PSLNK I= EF9F1;
      EF9F1+ NXTDS := NIL
      E " D ;
 FEOET+6+NFLS+VFHICLE+CHARACTERISTICS+ET:
      BEGIN
      NF+(EE9P1, EEUF1+6+NFLS+VEHICLE+CHARACTERISTICS+ET);
      AFK(EF9F1);
      EE8KUPUSHCEE9DS C
      F+15+MELS+EMITTER+CHARACTERISTICS+FILE], EE9F1+);
      EESTNOS(EE9F11);
      EF9P11.DSLNK := EF9F1;
      EF9F1+ MATOS IM NTL
      ENUT
 FEUET+11+UF (ECTED+ENTSSIONS+DD+TDQA+ET:
      HFGIN
      NEW(EF9P1, EEOFT+11+DETECTED+EMISSIONS+DD+TDOA+ET);
      MF# (EF4F11;
      EFAKOPOSH (EF 90ST
      F+17+NELS+ESTIMATED+EMIT1FR+PARAMETERS+FILE
      1, EE9F11);
      EESTNOS(EF9F1+);
      EE9Pit.DSLNK ## EE9Fit
      NEW (LEGE2);
      EF#KUPDSH(EE9DS)
      F+13+NELS+ESTIMATED+GEOUND+TRUTH+FILE1, EE9F2+);
      EE&INDS(EE9F21);
      EF4F1+ . TUS := EF4F2;
      EF9F1 1= EE9F2 1
      EEGF11. RXTDS IE NIL
      F -: ( 1
 FEDET+12+UFTECTED+EMISSIPHS+COARSE+ET:
      BEGIN
      NFX(EF9P1, EEOET+12+DETECTED+EMISSIONS+COARSE+ET);
      NEH(EF9F1):
      EE8KOPDSH(EE9DS(
      F+17+MELS+ESTIMATED+EMITTER+PARAMETERS+FILE
      1,EE951+);
      EFHIRMS(LE9F11);
      FEGPIT. PSENY IM EEGF1:
```

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17-Mer-1983 17:42:51
                                                                      VAX-11 [
                                             17-Mer-1983 17:19:39
    ----Source Listing
                                                                      DISKSUS
               NEW (EE9F2);
               EE8KOPD8H(EE9D8 (
               F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE1, EE9F2+);
               EEBINDS(EE9F2+);
               EF9F1+ NXTD8 Im EE9F2+
               EE9F1 := EE9F2;
               RESFIT. NXTOS := NTL
               END+
          FEOET+13+DETECTED+EMISSIONS+FINE+ET:
               BEGIN
               NEW(EE9P1, EEGET+13+DETECTED+EMISSIONS+FINE+ET);
               NEW (EE9F1);
               EF8KOPDSH(EE9DST
               F+17+NELS+FSTIMATFD+EMITTER+PARAMETERS+FILE
               1,EE9F1+);
               EESTNDS(EE9F1+);
               EF9P1+.OSLNK 1= EF9F1+
               NEW (EF9F2);
               EF8KOPDSH(EF9DS (
               F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE3, EE9F2+);
               EFBINDS(EE9F2+);
               EE9Fit.NXTDS := EE9F2:
               EF9F1 1= EE9F2 1
               EF9F1+. "XTDS := NTL
          END
     EEGINP := EFGP1;
     EESTART. INTYR := FESINS:
EESTART. FLAK := NIL:
     EEGINDI, QUNK := NIL:
     EF9THP1.CNT8 := 0;
     EFFURT DUED IS FALSE
     END (* EERNEWT *);
PROCEDURE EERDIST (REGINALEETINETE);
     HEGTN
     CASE FEGINPE, THITTE OF
        EELACILL
          EEOF+01+3RIDGE+LOCATIONS+FILE:
               REGIN
               FEADDSH(EFGINP);
               UTSPUSE (EF9INP, FE0F+01+RRIDGE+LOCATIONS+FILE)
               F'10:
          EEOR+02+CAPTO+UPDATE+FTLE:
               SFGIN
               EFBOUSH(EE9INP);
               WISPOSE (EEGINP, FEOF+02+CARTO-UPDATE-FILE)
               END:
          FEOF+03+CITY+LOCATIONS+FILE:
               REGIA
               EEEDOSH(EE9INP);
               DISPUSE (EE9INP, FE0F+03+CITY+LOCATIONS+FILE)
              END
          FECF+04+CMDRS+DATA+TO+HPDATE+FILE:
               HEGIN
               EF8DOSH(EE9INP);
               DISPOSE (EEGINP, FEOF+04+CMDRS+DATA+TO+UPDATE+FILE)
```

Course I dobles	17-Mar-1983 17:42:51 VAX-11 F
	17=Mer=1983 17:19:39 DISKSUSE
END;	
EEGF+65+FEASIBLE+ACTIVITY+A	REA+FILE1
BEGIN	
EF8008H(EE9INP);	
<u> </u>	+FEASIBLE+ACTIVITY+AREA+FILE)
END;	
FEOF+06+FLIGHT+PROFILE+FILE	1
EEBDOSH(EE9INP);	. D. Coulb. Shope. D. Co. D.
DISPOSE (EEGINP, EEOF+06	+FLIGHT+PROFILE+FILE)
END;	*1 P -
EENF+07+GROUP+TARGET+LOCS+F	ILE:
AEGIN	
EEBDOSH(EEGINE):	
	+GROUP+TARGET+LOCS+FILE)
FND;	
FECF+ OS+HYPSO+DATA+FILE+	
AFGIN	
EFROUSH(EEGINP);	
DISPOSE (EFGINP, EEOF+08	
END;	71.54
FEOF+09+MAPSHALLING+AREAS+F	TFE:
BEGIN SECONDARY	****
EFSDDSH(EE9INP);	**************************************
	+MARSHALLING+AREAS+FILE)
EEOF+10+MELS+CANDIDATE+TARG	[TC4 [] E
BEGIN	E1341161
EFADDSH(EFGINP);	+NELS+CANDIDATE+TARGETS+FILE)
END:	AVECOACTION TOWNERS WAS I SALIES
FEOF+12+DETECTED+CANDIDATE+	TADESTRASTICA
REGIN	+ W U U C + O W T U C + O W T U C A
EEBOUSH(EE9INP);	
DISPOSE (EEGINP.	
EEOF+12+DETECTEN+CANDT	DATESTARGETRAFILET
ENDI	PHILE PHILIPPI TEEN
FEOF+13+NELS+EMISSION+THREA	TATARI FAFTI FO
BEGIN	
EEBODSH(EE9INP);	
DISPOSE (EEGINP.	
EEOF+13+NELS+FHTSSION+	THREAT+TABLE+FILE)
ENDT	The state of the s
FEOF+14+NELS+EMITTER+ACTIVI	TY+GROUND+TRUTH+FILE:
BEGIN	
EF8DDSH(EE9INP);	
DISPOSE (EF9INP.	
	CTIVITY+GROUND+TRUTH+FILE)
END:	wilding the companies that the control of the contr
	TERISTICS+FILE1
BEGIN	
EEBODSH(EE9INP):	
DISPOSE (EEGINP.	
EEOF+15+NFLS+FMITTER+C	
E401	CONTRACTOR
FEOF+16+MELS+EMITTER+FILE:	
REGIN	

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17-Mar-1983 17:42:51
                                                    VAX-11 F
                              17-Mar-1983 17:19:39 DISKSUS
- Source Listing -
     EFEDDSH(EE9INP);
-----DISPOSE(EEGINP, EEGF+16+NELS+EMITTER+FILE)
FEOF+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE:
  -- <del>41936</del> ---
     EEPDOSH(EF9INP):
     DISPUSE (EF9INP,
END;
FEOF+19+NELS+ESTIMATED+GROUND+TRUTH+FILE:
  - - SFGIN
     FESDOSH(EE9INP);
     DISPOSE (EEGINP,
 EFOF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE)
     ENO;
EEOF+19+NELS+FREGUENCY+SCAN+FILE:
    HEGIN ...
     ESSODSH(EE9INP);
     CISPOSE (EEGINP, EEAF+19+NELS+FREQUENCY+SCAN+FILE)
 ----<del>-</del>E404
FEOF+20+NELS+PRE+BRIEFFD+A0I+FILE:
     HEGTY
EFROUSH(EFRINP)
     OTSPOSE (EFGINP, FEOF+20+NELS+PRE+BRIEFED+A01+FILE)
     END:
EROF+21+HELS+PRE+8PIFFFO+SOI+FILE1
     BESIN
     EFBOOSH(EE9INP);
 DISPOSE LEGGINP, FEOF+SIANEL SAPPE+BRIEFED+SOIAFILE)
     无规则
FECF+24+"5US+TOB4+DB+FTLF:
    -AFGIA-
     ECAPOSH(EE9INP);
     DISPOSE (FEGINP, FEOF+24+NELS+TOOA+DD+FILE)
   E:179
FEOF+25+NELSHTYPED+EMITTEH+HEPORT+FILE:
     HEGIN
ECROUSH(EEGIAP);
     UTSPOSE (EEGINE.
     EFOF+25+NELS+TYPED+EMITTEP+REPORT+FILE)
 FEOF+24+'ELS+4FATHER+CONDITIONS+FILE:
     4=614
 ....EFADUSH(EF9INP):
     TISPUSE (EFGINE, FEOF+26+HELS+WEATHER+CONDITIONS+FILE)
     F ....
MEGTA
     FFS 133H(EF9INP):
    .DISCUSE (EFGIMP, FEOF+27+PLATFORM+CONTROL+FILE)...
TEOF+24+78IMARY+POMUS+FILE:
     AF41N
     EFHOUSH(EFFINE);
     UTSTUSE (EESTINP, FEOF+28+PRIMARY+POADS+FILE)
     Enp.
FECF+23+PATLPDAD+LOCATIONS+FILF:
```

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Source Listing
                                   17-Mer-1983 17:19:39
                                                            DISKSUSE
     BEGIN
     EFROUSH(LEGIAR);
     DISPUSE (EE9INP, FE1F+29+RATLROAD+LOCATIONS+FILE)
     ENDE
FEOF+30+RIVER+LUCATIONS+FILE:
     BEGIN
     EFRITOSH (EF9INP);
     DISPUSE (EEGIAP, EEOF+30+RIVER+LOCATIONS+FILE)
     END;
FEOF+31+SECONDARY+ROADS+FILE:
     BEGIN
     FFADOSH(EF9INP):
     LISPUSE (EEGINP, FEOF +31+SECONDARY+ROADS+FILE)
     とと10:3
FEOF+32+SENSOR+ORBIT+MOUS+FILE:
     REGIN
     EFRODSH(EF9INP);
     MISPOSE (EEGINP, FEOF+37+SENSOR+ORBIT+MODS+FILE)
     £ "11;
FECF+3545E\SOR+PLATFORMHI GCATION+FTLE:
     FILIN
     EFAL JAH(EE9INP):
     DISPOSE CEEPINF, FEOF+33+SENSOR+PLATFORM+LOCATION+FILE
     ENU;
FECF+34+SELSCH+STATUS+FILE:
     FFGIN
     EEROUSI (EFOINP);
     WISPOSE (EEGINP, FEOF+34+SENSOR+STATUS+FILE)
"+01+ER+"ELSHU"IT+140+FNVIFUMMENT+DATA+MSG+IN:
     of 6 IA
     EENDOSH(EE9INP);
     EISPUSE (EEPINP,
     MEGI+ES+NELS+UNIT+AUD+ENVIRONMENT+DATA+MSG+IN)
MEDZENFLSECARTOHUPDATESEMSGETN:
     EF80USH(EE9INP)+
     DISPUSE (EEGING, M+02+NELS+CARTO+UPDATES+MSG+IN)
     F. L. Q. :
MEDSELFLERECOMMANDERSERFULLIPEMENTSEMSREIN:
     FEIN
     EEaDDSH(EE9INP);
     SISPUSE(EE91 VP,
     **+03+FELS+COMMAPDERS+PEQUIREMENTS+MSG+IN)
     ENDS
MADUANGLISHMOMIFIFDATASKAMSCATNI
     SECTA
     REBOLSH(REGINE):
     DISPOSE (EEGINP, M+04+HFLS+MODIFIED+TASK+MSG+IN)
     EMO:
Meddeneusedebliemublficationsemsgein:
     HEGIN
     EFHOUSH (EF9TNP):
     HISPOSE (EEGING, "+16+NELS+ORGIT+MODIFICATIONS+MSG+IN)
     EAR :
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17-Mer-1983 17:42:51
17-Mer-1983 17:19:39
  Source Listing
 M+03+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN:
      BEGIN
      EFanosh(EEGINP);
      DISPOSE (EEGINP,
      M+08+NELS+PRIGRITIZED+SENSOR+DIRECTIONS+MSG+IN)
      END:
 "+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN:
      BEGIN
      EFSDOSH(EESINE);
      DISPOSE (EE9INP,
      HEUGHNELSEREQUESTED-SENSOR-DATA-MSGEIN)
      END:
"+15+T+4"D+C+STOP+NELS+MSG+IN:
      BEGIN
      LEBOUSH (EEGINP);
      CISPOSE (EEGINP, M+1S+T+AND+C+STOP+NELS+MSG+IN)
      Engl
M+054NELS+NOM+SURVEILLANCE+TARGET+REPORTS+MSG+OUT:
      4FGIM
      EEBODSH(EE9INP);
     OTSPOSE (EF9INP,
      Y+05+MELS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT)
     END.
M+0741ELS+PLATFOFM+LOCATTON+REPORTS+M8G+OUT:
     TEGIN
      EEBOUSH(EE9INF);
     DISPUSE (EEGINP,
      MARTHNELS+PLATFORM+1, OCATION+REPORTS+MSG+OUT)
     ENGI
Metuentlsesensonerrquestsemscenut:
     PEGIN
     EEBBUSH(EE9INP):
     DISPOSE (EEGINP, "+10+NELS+SENSOR+REQUESTS+MSG+DUT)
     ENU:
M+11+NELS+SENSUR+SYSTEM+STATUS+MSG+OUT:
     bEUIN
     EFBOOGH(EF9TWP);
     DISPOSE (EEGINP,
     THE 11 FE ELS+SENSUP+SYSTEM+STATUS+MSG+OUT)
     ENDY
Me12+NFLS+SURVFILLANCE+TARGET+REPURTS+MSG+OUT:
     UFGIN
     EFADOSH(EF9INP);
     DISPUSE (EF 91 NP.
     M+12+NELS+SURVEILLANCE+TARGET+REPORTS+MSG+OUT)
     EMO:
"+13+NFLS+TASKING+RESPONSES+MSG+OUT:
     MEGIN
     EFATUSH(EE9INP):
     WISPUSE (EF9IND, No.136NFLS+TASKING+RESPONSES+MSG+OUT)
     E 40 ;
"+14+NELS+TRACK+MERSAGF+MSG+OUT:
     BEGIN
     EESDUSH(EF9TNP);
     DISPOSE (EFGINP, "+14+NFLS+THACK+MESSAGE+MSG+OUT)
     1: VIII 9
FERET+10+GRUUND+SHADOWING+CANDIDATE+TARGETS+ET:
```

VAX-11 F

DISKSUSF

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17-Ker-1983 17:19:39
                                                            DISKSUSE
 Source Listing
      BEGIN
      EF8DDSH(EE9INP);
      DISPUSE (EEGINP,
      EFOET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET)
      ENDI
FEOET+5+NELS+PRE+BRIFFED+SOI+ET:
      BEGIN
      ERBOCT" (EEGINP);
      DISFOSE (ERGINP, FEOET+5+NELS+PRE+BRIEFED+SOI+ET)
      END;
FEORTHRANEL SAPREABRIFFEDAADIAET:
      BEGIN
      LEBOUSH(EESTNP);
      OTSPOSE (EEGINP, EEGET+8+NELS+PRE+BRIEFED+AGI+ET)
     END:
EEGET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET:
      HEGIN
     EFADUSH(EF9INP);
      PISPOSE (EEGINP,
     EFOET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET)
     END;
EEOET+2+NELS+EMITTER+GROUND+TRUTH+ET:
      BEGIN
      EERDUSH(EE9THP);
     DISPUSE (EEGINP, FEDET+2+NELS+EMITTER+GROUND+TRUTH+ET)
     END;
FERET+7+NELS+WEATHER+ET:
      BEGIN
      EFADOSH(EE9INP);
      LISPUSE (EFGINP, FEOET+7+NELS+NEATHER+ET)
      E 101
FERETASAUELSAFLIGHTAETS
      SEGIN
      EEBDOSH(EE9INP);
      GISPOSE (EEGINP, FEOET+3+NELS+FLIGHT+ET)
      ENDI
ELPET+#+MELS+FREQUENCY+SCAN+FT:
      SEGIN
      EFARUSH(EE914P):
      DISPUSE (EEGINP, FEDET+4+NELS+FREQUENCY+SCAN+ET)
     £ UD #
FERET+1+MELS+EMISSION+THREAT+ET:
      BEGIN
      EEBDUSHIEE9INP);
      DISPOSE (EF9INP, FEDET+1+NELS+EMISSION+THREAT+ET)
      END:
EEGET+6+NELS+VEHICLE+CHARACTERISTIUS+ET:
      MEGIN
     EEBOUSH (EE9INP) +
      DISPUSELLEGIAP,
     EEOFT+6+NELS+VEHICLE+CHARACTERISTICS+ET)
      END:
_EEGET+11+DETECTED+EMISSIONS+DD+TDOA+ET1...
      SEGIN
      EF800SH(EE9INP):
      DISPOSE (EF9INP.
     EFOF (+11+PETECTED+EMIRSTONS+DO+TORA+ET)
```

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                                                               VAX-11 F
                                       17-Her-1983 17119139
       END:
        FECET+12+UFIFCTED+EMISSIONS+COARSE+ET1-
              BEGIN
              EFBDDSH(EE9INP);
             FISPOSE (EEGIND, EEGET+12+DETECTED+EMISSIONS+COARSE+ET
              END:
    BEGIN
              EE8DOSH(EE9INP);
              CISPOSE (LEGINE, FEGET+13+DFTECTED+EMISSIONS+FINE+ET)
         END
  - EUU (* FERDISI *);
PROCEDURE EESINGL (FE9DSI: EE7DSLST);
    HEGIN.
    CASE EEODSI OF
         EE1NCUS:
         EC+1+NELS+DETECTABLE+EMISSION+BREAKOUT+EC+
              D+140+TBD+DATA := TRUE
             ENDI
         EC+2+NELS+SCENARIO+EC:
              BEGIN
             C+140+TRD+DATA 18 TRUE
              ENDI
         EC+3+NELS+TASKS+EC:
             PEGIN
              C+140+T8D+DATA := TRUE
              ENDY
         EC+4+NELS+THREAT+EC+
              REGIN
              D+140+TBD+DATA := TRUE
              ENUI
         FC+5+NELS+VEHICLE+CHARACTERISTICS+EC:
             C+140+TBC+DATA := TRUE
              END:
         EC+6+0FTECTED+EMISSIONS+INFO+EC:
             BEGIN
         Ent
    END (* EFRINCL *);
FUNCTION EFREYOMP (BEGINP: BETINPTP): BETCHPR;
    BESTA
    CASE FEGINP+. INTYP OF
         FEINCIN:
        FECF+01+BRIDGE+LOCATIONS+FILE1
              BEGIN
              EEBKYCMP: =EE6UNO
             END +
         FEOF+02+CARTO+UPDATE+FILE:
              REGIN
              IF FEGINPT.FEOF+02+CARTO+UPDATE+FILE.
              D+029+CARTO+SECTION+NUM+DATA <
                               E-87
```

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VAX-11 F
                                17-Mar-1983 17:42:51
- Source Listing
                                17-Mer-1983 17:19:39
     0+029+CARTU+SECTION+NUM+DATA THEN
         EERKYCMP 1= EEGLIN
     ELSE IF EE9INPT.EE0F+02+CARTO+UPDATE+FILE.
     D+029+CARTO+SECTION+NUM+DATA >
     D-029-CARTO-SECTION-NUM-DATA THEN
          EERKYCMP := FEGGTN
     ELSE FERNYCMP := EEAEQL
     END
ELOF+03+CITY+LOCATIONS+FTLE:
     SEGIN
     EE8KACWB: = EPINU
     END
SEOF+04+CMDRS+DATA+TO+UPDATE+FILE:
     bFGIN
     EE8KYCHP:=EE6UNO
     END
FEOF+05+FEASIBLE+ACTIVITY+AREA+FILE:
     EERKACHL != EEPANU
     ENG. ...
FEOF+06+FLIGHT+PROFILE+FILE:
     BEGIN
     EF8KYCMP:=EF6UND
     ENO
EEOF+07+GROUP+TARGET+LOCS+FILE:
   BECIN
     EE8KYCMP: #EE6UNO
     END
EEOF+08+HYPSO+DATA+FILE:
     BEGIN
     FESKYOMP:=EE60110
     EECF+09+MARSHALLING+AREAS+FILE:
     BEGIN
     EFAKYCMP: EEE6UNC
     END :
FEOF+10+MELS+CANDIDATE+TARGETS+FILE:
     EEGIN.
     EEBKYCMP:=EE6UND
     END
EECF+12+DETECTED+CAMDIDATE+TARGETS+FILE:
     HEGIN
     EEBKYCMP: = EEGUNO
     EVC :
FEOF+13+NELS+EMISSION+THREAT+TABLE+FILE:
     AFGIN
     IF EEGINPA . EEOF + 13+NELS+EMISSION+THREAT+TABLE+FILE.
     S+U79+NELS+EMITTER+TIME+OF+LOCATION+DATA <
     SHO74+NELS4EMITTER+TIME+OF+LOCATION+DATA THEN
          FERNYCMP := FEALTN
     ELSE IF EEGINDT.
     EFUF+13+NELS+FMISSION+THREAT+TARLE+FILE.
   BEC79+ NELS-EMITTER-TIME+OF+LOCATION+DATA >
     WHETTHE TIME + OF + LOCATION + DATA THEN
          FERKYCHP IS FEGGTN
     ELSE FLAKYOMP IN FEAEGL
     F . L .
```

```
FEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE:
     HEGIN
     IF EEGINPT.
     EEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     0+075+8+NELS+EMITTER+ID+DATA 4
     D+075+8+NFLS+EHITTER+ID+DATA THEN
          ELBKYCMP := FE6LTN
     ELSF IF EEGINPT.
     EFOF+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     D+075+8+NELS+EMITTER+TD+DATA >
     D+075+8+NELS+EMITTER+ID+DATA THEN
          EERKYCMP := FEGGTN
     ELSE FERKYCMP := FEGERL
    END
FEOF+15+NELS+EMITTER+CHARACTERISTICS+FILE:
     BEGIN
     FESKACHB 1=EEQIINU
     eab
FEOF+16+NELS+EMITTER+FTLE:
     EFGT4
     EFEKYEMP: #EF6UNG
     END ;
FEOF+17+NELS+ESTINATED+EMITTER+PARAMETERS+FILE:
     BFGIM
     EFAKYOMP:=EF6UNO
     EHD
FEOF+18+MELS+ESTIMATED+GROUND+TRUTH+FILE:
     REGIN
     EF8KYCHP1=EF6UND
     FAG: 1
FEOFET94"ELS+FREGUENCY+SCAN+FILE:
     SFGIN
     EEAKYCMP:=F86UND
     END
FEOFAZOANELSAPREABRIFFEDAADIAFILE:
     .. F 15 T N
     FERKYOMP:=EE6UND
     ر يه ج
FEOF+21+NELS+PRE+3FIFFEO+SCI+FILE:
     REGIN
     FFRKYCAP: = EF6UND
     EM0
FrOF+24+NELS+TOUA+DO+FILE:
     BEGIN
     EFAKYCMP:=EE6UNO
     t VU
FEOF+25+MELS+TYPEO+EMITTER+REPORT+FILE1
     38 6 T 20
     FF6XYCMP1=EF6UND
     EMO
FEOF+26+NELS+WEATHER+CONDITIONS+FILE:
     JEGIN
     EFBKYCMP:=EF6UNO
     5.35
FEOF+27+PLATFORM+CONTROL+FILE:
     SECTS
     EFEKYCHP1#EF6UNG
```

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                                                             DISKSUSE
-- Source Listing ....
      END
- FEOF+28+PRIMARY+ROAD8+FILE1
       BEGIN
       EE8KYCMP: #EE6UNO
     END---
 FEOF+29+RAILROAD+LOCATIONS+FILE:
      BEGIN
      FERKACMB != EEPANO
       END ;
 FEOF+30+RIVER+LOCATIONS+FILE:
       REGIN
       EE8KYCMP:=EE6UNO
       END
 FEOF+31+SECONDARY+ROADS+FILE:
       BFGIN
       EF8KYCMP:=EF6UND
       ENG :
 FEOF+32+SENSOR+ORBIT+MODS+FILE:
       SEGIN
       EEBKYCMP1=EE6UNG
       END :
 FEOF+33+SENSOR+PLATFORY+LOCATION+FILE:
       SECTN
       EF8KYCMP1#EF6UND
       E 10
 FEOF+34+SENSOR+STATUS+FILE:
       REGIN
       EE8KYCMP: SEF 6UNO
       END
 "+01+ES+NELS+UMIT+AND+FAVIRONMENT+DATA+MSG+IN:
      HFGIN
      IF FEGINPS.
       m+01+ES+NFLS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN.
      FEITIME < EFITIME THEN
            EEBKYCMP I= FEALTN
       ELSE IF EF9TNPT.
       M+01+FS+NELS+UNIT+AND+ENVIRONMENT+DATA+M8G+IN.
       EFITIME > EFITIME THEN
            EE8KYCMP I= FEAGTN
       ELSF FERKYOMP I= FEREDL
       F .: C
 MenzenFlaccarioeuppatesensgein:
       REGIN
       IF EEGINPT. H+02+NELS+CARTO+UPDATES+MSG+IN. EE1TIME <
       EESTIME THEN
            FERKYCMP 1= FEGLTN
       LLSE IF EEGINPT.M+02+NELS+CARTO+UPDATES+MSG+IN.
       EFITIME > EFITIME THEM
            FERKYCHP 12 FEAGTN
      ELSE ELBAYONP IZ FEGEGL
       END
  M+03+NELS+COMMANDERS+REGUIREMENTS+MSG+IN:
       BEGIN
       IF FEGINPT. M+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN.
       ERITIME . EFITIME THEM
           FERRYCHP IN FEALTN
       ELSE IF ECGINPT.
```

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VAX-11 F
                                  17-Mar-1983 17:42:51
-Source Listing -
                                  17-Mar-1983 17:19:39
                                                           DISKSUSE
     M+03+NELS+COMMANDERS+REQUIREMENTS+MSG+IN_EESTIME >
     EFITIME THEN
          EEBKYCMP := EEGGTN
     ELSE EEBKYCMP := EE6EGL
     END . .
M+04+NELS+MODIFIED+TASY+MSG+IN:
     BEGIN
     IF EEGINPT. M+04+NEL8+MODIFIED+TASK+M8G+IN. EE1TIME 4
     EESTIME THEN
         EERKYCHP I= EEGLTN
     ELSE IF EFGINPT. M+04+NEL8+MODIFIED+TASK+MSG+IN.
     EFITIME > EFITIME THEN
    FERKYCMP := FEGGTN
ELSE FERKYCMP := EEALOL
    END :
M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN:
    BEGIN
     IF EEGINPT.M+06+NELS+ORRIT+MODIFICATIONS+MSG+IN.
     EETTIME < EETTIME THEN
          EESKYCHP 1= EE6LTN
     FLSE IF EF9INPT. M+06+MELS+ORBIT+MODIFICATIONS+MSG+IN
     .EEITIME > EEITIME THEN
         - EEBKYCMP 12 EEGGTN
     ELSE FERKYCMP := EEAEGL
     END
M+08+NFLS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN1
    BEGIN
     IF FEGINPT.
    M+GR+NELS+PRIGHITIZFD+SENSOR+DIRECTIONS+MSG+IN.
     EETTIME < EETTIME THEM
          FERKYCMP := FE6LTN
    FLSE IF EFRINPT.
     M+03+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN.
    EETTIME > EETTIME THEN
         - FERKYCMP IN FEAGTN
    ELSE FEBRYCMP := FEGERL
     END
M+09*NELS+REQUESTED+SENSOR+DATA+MSG+IN:
     BEGIN
     IF EEGINPT. M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN.
     FEITIME & EFITIME THEN
          EERKYCMP 1= EEALTN
     ELSE IF EEGINPT.
     M&OQ+NELS+REUHESTED+SENSOR+DATA+MSG+IN.EE1TIME >
     EESTIME THEN
          FERKYCMP := FEGGTN
     ELSE FRAKYCHP 12 FEALOL
     EMD
"+15+T+A"D+C+STOP+NELS+MSG+IN:
   ...BEGIA
     IF EEGINPT. Y+15+T+AND+C+STOP+NELS+MSG+IN. EEITIME <
    LETTIME THEN
          FERKYCMP IS EEGLIN
    LLSE IF EEGINPT. M+15+T+AND+C+STOP+NELS+MSG+IN.
     EEITIME > EEITIME THEN
          FERKYCMP IR FERGIN
     ELSE FERKYCMP I= EE6EOL
```

```
17-Mar-1983 17:19:39 -- DISKSUS!
- Source Listing
      END
 M+13+NELS+TASKING+RESPONSER+MSG+OUT1
      BEGIN
      IF EE91NP+.M+13+NFLS+TASKING+RESPONSES+M8G+OUT.
     EFITIME < EEITIME THEN
          FERKYCMP := EE6LTN
      ELSE IF EF9INPT. M+13+NELS+TASKING+RESPONSES+MSG+OUT.
     FEITIME > EEITIME THEN
           EERKYCMP := EEGGTN
     ELSE EERKYCMP := FEBERL
----- EN()-------
M+14+KELS+TRACK+MESSAGE+MSG+OUT:
     HEGIN
   - IF EEGINPA, MAIUANELSATRACKAMESSAGEAMSGAOUT, EEITIME
       < EETTIME THEN
           EEBKYCMP := EE6LTN
  ELSE IF EF91NPT.M+14+NELS+TRACK+MESSAGE+M8G+OUT.
      FFITIME > EFITIME THEN
           FERKYCMP := FEAGTN
-- ELSE ELRNYCHP 12 EEALOL
      ÉNO
FECET+10+GROUND+SHADOWING+CANDIDATE+TARGETS+ET:
--- HEGIN.
      FERKACHE: #EE611MC
      ÉMO
FERET+S+NELS+PRE+BRIFFED+SRI+ET1
     FECI N
      EFRKYCHP:=EE6UNO
    ---EMD------
FEARTH 9+NELS+PRE+BRIFFED+AOI+ET:
     #FG[N
    - £ E # K + C W P + R E E P (IND
     END :
 EEOET+9+SIGNAL+HOISE+CANDIDATE+TARGETS+ET:
     - FETIL .
      EFRYYOMP: =EE6UNO
      € 10
FEOFIA 24 LEL SAL "ITTERAGROUNDATRUTHAET!
     MEGIN
      EEBKACWD:=EEPfiNG
     E M4):
 FERET+7+MELS+HEATHER+ET:
     BEGIN
     _EFEKYCHF1=EE6HMO
     END :
 FERET+3+NELS+FLIGHT+FT:
  ₽FGIA.
      EFEKYOMPI=EF6UND
 EECET + 4 - MEL SAFRE QUENCY + SCANAFT!
      8561N
      EFRHYCMP: EF6UNO
 FEAFT+1+151 S+EMISSIDM+THREAT+ET:
     #FGJ \
      FENKAL . D: SEEPING
      F 16 1
                          E-93
```

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                                                                       VAX-11 P
         -- Source Listing
                                              17-Mar-1983 17:19:39---
          FEGET+6+MELS+VEHICLE+CHARACTERISTICS+ET:
               BEGIN
               EE8KYCMP: =EE6UND
               END ;
          FEDET+11+DETECTED+EMISSIONS+DD+TDQA+ET+
                BEGIN
               EFSKYCLP1=EE6UNG
               ENG- 1
          FEOET+12+DFTECTED+EMISSIONS+COARSE+ET:
               BEGIN
               FERKACML:=FEPTING
               640 1
          FECET+13+DETFCTED+FMISSIONS+FINE+ET:
               BEGIN
               EEBKYCHP1=EE6UNO
          FAD
     E''O (* FEPKYC"P *);
PROCEDURE FERFORM (FEGINS: EFTINLST):
     SEGTA
     CASE FERI'S OF
          FEINCIN:
           HERTELSHIELSHUMITHANDEFNVIRONMENTEDATAEMSGEIN:
               PEGIN
               FF90S([NTO+NELS+SFHSDR], INSTT:= EF6NEW;
                EF90ST19TC+DELS+SENSORI.INTYP:#
                "+01+FS+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN
               ENDI
          *+02++FLS+CARTO+UPDATES+MSG+IN:
               SFGIN
               EE90S(INTO+NELS+SENSOR).INSTT:= EE6NEW;
EE90S(INTO+NELS+SENSOR).INTYP:=
                *+02+NELS+CARTU+UPUATES+MSG+IN
                END;
          M+03+NFLS+COMMANDERS+RFWHIREMENTS+MSG+IN:
                #F611
               LE 905 (INTO+HELS+SENSUR) . INSTT:= EE6NEW;
                EF 905 ! I ITO+NELS+SFHSOR : INTYP:=
                M+03+NELS+COMMANDFRS+PEQUIREMENTS+MSG+IN
               END;
           1+04+NFLS+MODIFIED+T&SK+MSG+TN1
                35676
                EE90SIINTO+MELS+SENSUR], INSTT:= EE6NEW;
               FF905 [INTO+NELS+SENSOR] . INTYP:#
                M+04+NELS+NODIFTED+TASK+MSG+IN
               ENDI
          MARGARESARROITAMODIFICATIONSAMSCAIN:
               MEGIN
               EE90STINTO+NELS+SENSOR1.IMSTT:= EE6NEW:
               EF90S (INTO+NELS+SERSUR) . INTYP:=
                M+OA+NELS+UPHTT+MODIFICATIONS+MSG+IN
               £401
          "+D3+AFLS+PRIOPITIZED+SEMSOR+DIRECTIONS+MSG+IN:
                MEGTY
               EFROSTINTO-MELS+SFNSCRI.INSTT:# EF6NEW;
                EFFOS LINTO+KELS+SENSURI.INTYP1#
                                     E-94
```

```
Source Listing
     M+OA+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN
    END+
M+09+NELS+REQUESTED+SEMSOR+DATA+MSG+IN:
     BEGIN
     EEGN8: INTO +NELS+SENSOR] . INSTT: EEGNEW;
     EE90S (INTO+NELS+SENSUR) . INTYP:=
     M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN
     ENDI
M+15+T+AND+C+STOP+NELS+MSG+INE
     BEGIN
     EF90S (INTO+NELS+SENSOP) . INSTT:= EE6NEH;
     EFONS (INTO+NELS+SENSUR) . INTYPI=
     M415+T4ANC+C48TOP4NELS4MSG4IN
     END :
*1+05+NELS+NON+SURVEILLANCE+TARGET+REPORTS+MSG+OUT:
     BEGIN
     EFONS (TO+TIMING+AND+CONTROL+FROM+NEL8) . INSTT:#
      FEGNENS
     EF905 (TO+TIMING+AND+CONTROL+FROM+NELS) . INTYP:=
     ##65+NELS+NON+SHRVETLLANCE+TARGET+REPORTS+M8G+OUT
     END;
M+07+MELS+PLATFORM+LOCATION+REPORTS+MSG+OUT1
     HEGIN
     EFONS ITH+TIMING+AND+LONTHOL+FROM+NELS1.INSTT:=
     EEGOS (TOATIMINGAAMOACONTROLAFROMANELS) .INTYPE=
     F+07+MELS+PLATFORM+LUCATION+REPORTS+MSG+OUT
     FNI .
HALDONFL SO SENSORORFULL STSOMSCOOUT!
     MEGIN
     EFFOSTIMETIMINGEAMDECONTROLEFRUMENELS].INSTT:
      FEBRERS
     EE 905 (TO+TINTNG+A 10+CONTROL+FROM+NELS) . INTYP:#
      M+10+NELS+SENBUR+PERUFSTS+MSG+OUT
     ENDP
"+11+HFLS+SENSAR+SYSTE"+STATUS+NSG+OUT:
     MFGT.
     EEGES (TO TIMING AND ALBORTHOL FROM NELS) . INSTT:
       ELENERS
      EF90S(TO+TIMING+AMU+CONTROL+FROM+NELS).INTYP:=
      MATIANELSASENSORASYSTEMASTATUSAMSGAOUT
     たべしま
MATERIAL SABURVEIL LANCE ATARGET ARBEPTRES ANS GARUTE
      OFGIN
     EE9DS (TO+TIMING+AMD+CONTROL+FPOM+NELS).INSTT:=
       FEAREN!
      FEVDS (TO+TIMING+AND+CONTROL+FROM+NELS).INTYP:#
      *+12+BELS+SURVETLLAMCE+TARGET+REPORTS+MSG+OUT
      F 110 :
Net3englsetaskingeresponsesemsgeout:
      BEGIN
      EE9DS (TO+TIMING+AND+CONTROL+FROM+NELS) .INSTT:=
       FEARENE
      EF90SIT0+TIMING+ANU+CONTROL+FRUM+NELS1.INTYP:=
      M+13+WELS+TASKING+RESPONSES+MSG+OUT
      E *10 1
 MAJUANEL SATEACKAPESSAGEAPSGADUT:
```

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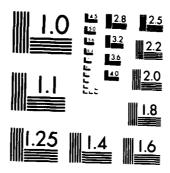
VAX-11 F DISKSUSE"

```
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                                                                    DISKSUSE
      --- Source Listing
               BEGIN
               EE90S(TO+TIMING+AND+CONTROL+FROM+NELS).INSTT##
               EE9DS(TO+TIMING+AND+CONTROL+FROM+NELS).INTYP:=
               M+14+NELS+TPACK+MF8RAGE+MSG+OUT
               END
         END
  ...END..(* FERFORM *);
( * ----
PROCEDURE FESCHYIN(VAR EEGINPIFETINPIR; VAR EEGIPZIEETINPIR);
    RECIN
     CASE FEGINPY. INTYP OF
          EEINGIN:
          FEOF+01+BHIDGE+LOCATIONS+FILE:
               AFGIN
               EEGTP21.EEOF+01+BRIDGE+LOCATIONS+FILE.
               0+026+BRIDGE+LOC+X+DATA:=EE9INP1.
               EFOF+01+BRIDGE+LOCATIONS+FILE.
               D+025+BRIDGE+LOC+Y+PATA:
               EF91P2+.EE0F+01+BRINGF+LOCATIONS+FILE.
               D+027+BRIDGE+LOC+Y+DATA: =EE9INPt.
               EEOF+01+BPIDGE+LOCATIONS+FILE.
               D#027#BRIDGE#LOC#Y#DATA
               ENUT
          FEOF+02+CARTO+UPDATE+FILE&
               REGIN
               EF91P2+.EF0F+02+CARTO+UPDATE+FILE.
               C+029+CARTO+SECTION+NUM+DATA:=EE9INPT.
               EEGF+02+CARTO+UPDATE+FILE.
               D+029+CARTO+SECTION+NUM+DATA;
               EF91P2+. LF0F+02+CARTO+UPDATE+FILE.
               DEGSO+CARTO+UPDATE+1+DATAIREE9INPT.
               EFOF+02+CARTO+UPDATE+FILE.U+030+CARTO+UPDATE+1+DATA;
               EE91P21.EF0F+02+CARTO+UPDATE+FILE.
               De031+CARTD+UPDATF+2+DATA:=EE9INPt.
               EFOF+02+CARTU+UPDAIF+FILE.D+031+CARTO+UPDATE+2+DATA1
               EE9127.EE0F+02+CARTO+UPDATE+FILE.
               D+032+CARTO+UPDATE+3+DATA:=EE9INPT.
               EEUF+02+CARTO+UPQ&TF+FILE.D+032+CARTO+UPDATE+3+DATA;
               EF91P21.EE0F+02+CARTO+UPDATE+FILE.
               D4033+CARTO+UPDATF+X+DATA1=EE9INP1.
               EEOF+02+CARTJ+UPDATF+FILE.D+033+CARTO+UPDATE+X+DATA1
               EEGIH21.EFOF+02+CARTO+UPDATE+FILE.
               G+034+CARTU+UPDATE+Y+CATALEEGINPT.
               EFGF+02+CARTU+UPDATF+FILE.D+034+CARTO+UPDATE+Y+DATA
               END:
          EEDE+03+CITY+LOCATIONS+FILE:
               HEGIN
               EF91P21.EE0F+03+C1TY+LOCATIONS+FILE.
               De03S+CITY+LOC+X+DATA:=EE9INPt.
               EEOF+03+CITY+LOCATIONS+FILE.D+035+CITY+LOC+X+DATA;
               EEGIP21.EEOF+73+CTTY+LOCATIONS+FILE.
               C+C36+CITY+LOC+Y+DATA: EEGINPT.
               EFUF+03+CITY+LUCATIONS+FILE.D+036+CITY+LOC+Y+DATA
               ENOT
          FECF+04+CMCRS+DATA+TO+'JPDATE+FILE:
               HEGIN
```

17-Mar-1983 17:42:51

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17-Mar-1983 17:42:51
                                                       VAX-11 F
--Source Listing--
                                17-Mer-1983 17:19:39
                                                       DISKSUSE
     EF91P2+. LF0F+04+CMDPS+DATA+T0+UPDATE+FILE.
    - O+040+FIRST+CMDR6+RFQ+UPDATE+DATAI=EEGINP+.
     EFOF+04+CMDRS+DATA+TO+UPDATE+FILE.
     D+040+FIRST+CMDPS+RFU+UPDATE+DATA;
     EEGIP21.EEOF+04+CMDRS+DATA+TO+UPDATE+FILE...
     D+133+SECOND+CMDRS+PER+UPDATE+DATA:=EE9INP+.
     EFOF+04+CMDPS+DAT4+TO+UPDATE+FILE.
  --- O+133+SECOND+CHORS+REQ+UPDATE+DATA
     FND:
EEOF+65+FEASIBLE+ACTIVITY+AREA+FILE:
   -----F614
     EEGIP21.EF0F+05+FEASIRLE+ACTIVITY+AREA+FILE.
     C+143+X+LOC+FEASIBLE+DATA: #EE9INPT.
  0+143+X+LOC+FEASIBLE+DATA;
     EF9TP21, EE0F+05+FEASIRLE+ACTIVITY+AREA+FILE.
- DATESAYALOCAFEASIRLEADATATATEESINES
     tFOF+05+FEASIBLE+ACTIVITY+AREA+FILE.
     0+145+Y+LOC+FEARIBLE+DATA
   END
EEOF+OA+FLIGHT+PROFILE+FILE:
     BEGIN
 EF91P21.EE0F+06+FLIGHT+PROFILE+FILE.
     D+041+FLIGHT+WAYPOINT+X+DATA:=EE9INPT.
     EEOF+06+FLIGHT+PROFILE+FILE.
     S+041+FLIGHT+WAYPOINT+X+DATA:
     EE91P21.EE0F+06+FLIGHT+PROFILE+FILE.
     D+042+FLIGHT+WAYPOINT+Y+DATA:=EE9INPT.
  EFOF+06+FLIGHT+PROFILE+FILE.
     D+042+FLIGHT+WAYPOINT+Y+DATA;
     EF91P21.EE0F+06+FLIGHT+PROFILE+FILE.
    C+U43+FLIGHT+WAYPOINT+Z+DATA:=E9INP+
     EEOF+06+FLIGHT+PROFILE+FILE.
     D+043+FLIGHT+WAYPOINT+Z+DATA
     END
FEOF+07+GROUP+TARGET+LOC8+FILE:
     EFGIP2: EFOF+07+GROUP+TARGET+LOC8+FILE.
     D+048+GROUND+TARGET+LOC+X+DATAIMEE9INPT.
     EFOF+07+GROUP+TARGET+LOCS+FILE.
  De048+GROUND+TARGET+LOC+X+DATAL
     EF91P2+. LEUF+07+GPOUP+TARGET+LOCS+FILE.
     D+C49+GPOUND+TARGET+LOC+Y+DATA:=EE9[NPT.
     EFOF+07+GROUP+TARGET+LOGS+FILE.
     D+049+GPOUND+TAGGET+LOC+Y+DATA
     END:
FEOFAORAHYPSOADATAAFILE:
     EF91P21.EE0F+08+HYPS0+DATA+FILE.
 - C+051+HYPSO+ELEV+DATAIMEEQINRY,
     EEOF+08+HYPSO+DAT4+FILE.D+051+HYPSO+ELEV+DATA;
     EF91P21.EE0F+08+HYPS0+DATA+FILE.
  - OAOSZAHYPSOALOCAXADATA: REFOINPS.
     ESOF+08+HYPSO+DATA+FILE.D+052+HYPSO+LOC+X+DATA;
     EF91P2+.ER0F+08+HYPSO+DATA+FILE.
     D+053+HYPSO+LOC+Y+DATATHEE9INPT.
     EFOF+08+HYPSO+D4T4+FILE.D+053+HYPSO+LOC+Y+DATA
```

614 SREM (SOFTWARE REQUIREMENTS ENGINEERING METHODOLOGY) EVALUATION VOLUME 2..(U) MARTIN MARIETTA DENVER AEROSPACE CO A SIDNE ET AL. FEB 84 MCCR-83-553-VOL-2 RADC-TR-83-314-VOL-2 F30602-80-C-0272 F3/69/2 AD-A141 632 NL UNCLASSIFIED END 7-84



MICROCOPY RESOLUTION TEST CHART NATIONAL BUREAU OF STANDARDS-1963-A

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17-Mer-1983 17:42:51
                                                         VAX-11 F
                                 --- Source Listino ---
- FECF+09+MAPSHALLING+AREAS+FILE1 ----
     PEGIN
     EE91P21.EE0F+09+MARSHALLING+AREAS+FILE.
     C+054+MARSHALLING+X+DATA:=EE9INP+
      EFOF+09+MARSHALLING+AREAS+FILE.
     C+054+MARSHALLING+X+DATA;
 EF91P21.EEOF+09+MARSHALLING+AREAS+FILE.
      D+055+MARSHALLING+Y+DATAIMEEGINPT.
      EFOF+09+MARSHALLING+AREAS+FILE.
     C40554MARSHALLING+Y40ATA
      E"0;
 FEOF+10+MELS+CANTIDATE+TARGETS+FILE:
   .. _ EEGIN
      EF91P2+.EF0F+10+NELS+CANDIDATE+TARGETS+FILE.
      0+061+NELS+EMISSION+DURATION+DATA: #EE9INPT.
     EFOF+10+NFLS+CANDIDATE+TARGET CAFILE.
      C+OA1+NELS+EMISSION+DURATIC >+ DATA;
     EF91P2+.EE0F+10+NFLS+CANDIDATE+TARGETS+FILE.
      U+U424MELS+EMISSION+SIGNAL+STRENGTH+DATA:=EE9INP+...
     EFOF+10+NELS+CANDIDATE+TARGETS+FILE.
      0+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA:
     EFRIPST, EFOF-10+NELS+CANDIDATE+TARGETS+FILE.
     Decenser Else Emissiones TARTETIME + DATA : #EEGINPT.
     EEOF+10+NFLS+CAMDIDATE+TARGETS+FILE.
     U+063+NELS+EMISSION+START+TIME+DATA+
      EFGIP21.LEOF+10+NELS+CANDIDATE+TARGETS+FILE.
      DEU73ENELSEEMITTEREFREQUENCYEBANDWIDTHEDATA
      :=EE91\P1.EE0F+10+NFLS+CANDIDATE+TARGETS+FILE.
      C+073+VELS+EMITTER+FREQUENCY+RANDWIDTH+DATA;
     FF9JF21.EF0F+10+NELS+CANDIDATE+TARGETS+FILE.
     C+375+ YELS+EMITTER+ID+DATAL=EE9INP1.
     EFOF+10+NFLS+CAMDIDATE+TARGETS+FILE.
      C+075+NFLS+EMITTER+TD+DATA:
     EEGIP2+.EEGF+10+NELS+CANDIDATE+TARGETS+FILE.
     0+0°1+4FLS+EMITTEP+TRANSMISSION+FREQUENCY+DATA
      : #EF91 PP1.EE0F+10+NFLS+CANDIDATE+TARGETS+FILE.
     C+051+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA:
     EF91P21.EF0F+10+NFLS+CANDIDATE+TARGETS+FILE.
     O+0A5+NFL9+EMITTEP+Y+DATAIREEGINPT.
   LEOF+10+NFLS+CAMDIDATE+TARGETS+FILE.
      UMBASHNELSHEMITTERHX+DATA;
      EFGTP2+.EFOF+10+NELS+CANDIDATF+TARGETS+FILE.
     Dec 36+NELS+EMITTER+Y+DATAIREE9INP?
     LEUF+10+NELS+CA"DIDATE+TARGETS+FILE.
      D+096+NELS+EMITTER+Y+PATA:
   EEGIP21.EE0F+10+NELS+CANDIDATE+TARGETS+FILE.
      U+CR7+NELS+EMITTER+Z+DATA: REERINPT.
     REOF+10+VELS+CAMDIDATE+TARGETS+FILE.
      L+J87+NELS+EMILTER+Z+DATA:
     EF91F24. LEGF+10+NELS+CANDIDATE+TARGETS+FILE.
     C+130+SCENAFID+GEN+TD+NUM+DATA:#EE9INPT.
     EPOF+10+NELS+CAMOIDATE+TARGETS+FILE.
     FEOF+12+08TECTFU+CANDIDATE+TARGETS+FILE:
                           E-98
```

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Source Listing

EEGIP21.EFOF+12+DFTECTED+CANDIDATE+TARGETS+FILE. 0+147+NEL8+EMESSION+DURATION+DATAIMEEGINPT. EFOF+12+DETECTED+CANDIDATE+TARGETS+FILE. D+147+NFLS+EMISSION+DURATION+DATA; EF91P21.EE0F+12+DFTFCTED+CANDIDATE+TARGETS+FILE. 0+148+NELS+EMTSSION+SIGNAL+STRENGTH+DATA:=EEGINPT. EFOF+12+DFTFCTED+CANUIDATE+TARGETS+FILE. ##148+NELS+EMISSION+SIGNAL+STRENGTH+DATA; LEGIP2+ EFUF+12+DETFCTED+CANDIDATE+TARGETS+FILE. F+149+NELS+EMISSION+START+TIME+DATA:=EEGINPt. FEOF+12+DETECTED+CANDIDATE+TARGETS+FILE. O+149+NELS+FMISSION+START+TIME+DATA: EF91P21.EF0F+12+0FTFCTED+CANDIDATE+TARGETS+FILE. U+150+NELS+EMITTER+FREWHENCY+BANDWIDTH+DATA :=EFYINP1.EF0F+12+DFTECTED+CANDIDATE+TARGETS+FILE. D+150+NELS+EHITTE T+FREUJENCY+SANDWIDTH+DATA; EF91P21.EE0F+12+DFTECTED+CANDIDATE+TARGET8+FILE. O+151+NELS+EMITTER+ID+UATA:=EE9INP+. EFOF+12+OFTECTED+CAMDIDATE+TARGETS+FILE. U+151+NFLS+FAITTER+TU+DATA; EF91921.EE0F+12+DETECTED+CANDIDATE+TARGETS+FILE. D+152+HELS+FMITTER+THANSMISSION+FREQUENCY+DATA :=FE9TMP1.EE0F+12+DFTECTE0+CANDIDATE+TARGETS+FILE. D+152+4FLS+8HITTES+TRANSMISSION+FREQUENCY+DATA: EF91P71.EE0F+12+OFTFCTED+CAMDIDATE+TARGETS+FILE SHIFSHMELSHEDITTERHYADATASHEEDINPT. EFOF+12+UFTEUTED+CAMDIDATF+TARGETS+FILE. C41534NFLS+FMTTTER+X+DATA; EF91P2+.EF0F+12+DF1FC1ED+CANDIDATE+TARGETS+FILE. C+154+NFLS+FMTTTE9+Y+PATA:=EE9IMP+. EEOF+12+DETECTED+CAMUTUATF+TARGETS+FILE. U41544NELS4FAITTER4Y4DATAS EF91P21.LF OF+12+DFTECTED+CANDIDATE+TARGETS+FILE. ##155+NELS+EHTTTER+7+DATA1=EE9INP+. FFOF41240FTFCTFM4CANUTDATF4TARGETS4FILE. 0+135+ OFLS+FOITTER+7+PATA; EFRIPST. EFOF+12+OFIFCTEN+CAMDIDATE+TARGETS+FILE. U=156+SCEMARIG+GEM+ID+NUM+U4TA:=EE9INPt. EEOF+12+DFTFCTED+CANUIDATF+TARGETS+FILE. P+156+SCEMARID+GEM+TD+NUM+DATA ENDI FEOF+13+NELS+EMISSION+THPEAT+TABLE+FILE: EEGIP21.EFUF+134NFLS4FMISSICN4THREAT4TABLE4FILE. U+079+MFLS+FMITTEP+TIME+OF+LUCATION+DATA:=EE9INPT. FFUF+13+NFLS+EMISSION+THREAT+TARLE+FILE. U4079+NELS+FMITTER+TIME+OF+LUCATION+DATA: EF91P21.EE0F4134NFLS4FMTSSINN+THREAT+TABLE4FILE. 940804HFLS4FATTTER4THAFFIC4TYPE4DATA:=EEGINPT.

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EFOF+13+HFLS+FMTSSION+THREAT+TABLE+FILE. D+UPU+NFLS+EMITTEP+TRAFFIC+TYPE+DATA;

D41714NELS4FMTTTER4TD+D4T4:±EE9INPT. ELOF41344ELS4EMTSSION4THRFAT4TARLF4FILE.

U+171+NELS+FMETTEP+TU+DATA:

EF91P21, EE0F+13+NFLS+FMTSSION+THREAT+TABLE+FILE.

EF91P21.EF0F+15+NFLS+FMTSS10N+THREAT+TAPLE+FILE. 0+172+NFLS+FMTTTEP+THANSMTSS10N+FREQUENCY+DATA

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:=EE9INP+.EE0F+13+NFLS+FMISSION+THREAT+TABLE+FILE. U+172+NELS+EMITTER+THANSMISSION+FREQUENCY+DATA; EE91P2+.EE0F+13+NELS+EMISSION+THREAT+TABLE+FILE. D+173+NELS+EMITTER+X+DATA1=EE9INP+. EFOF+13+NELS+EMISSION+THREAT+TARLE+FILE. 0+173+NFLS+EMITTER+X+DATA; EF91P21.EE0F+13+NELS+EMISSION+THREAT+TABLE+FILE. D-174+NELS+EMITTER+Y+DATA: EEGINPT. EFOF+13+NELS+EMISSION+THREAT+TARLE+FILE. D+174+NFLS+EMITTER+Y+DATA; EF91P2+.EF0F+13+NFLS+FMISSION+THREAT+TABLE+FILE. 0+175+NELS+EMITTER+7+BATA1#EE91NP+. EFOF+13+NELS+EMISSION+THREAT+TABLE+FILE. 041754NELS4EMITTER+Z4DATA; EE91P21.EE0F+13+NFLS+EMISSION+THREAT+TABLE+FILE. 0+181+NELS+EMITTER+MODULATION+TYPE+DATA:=EE9INPT. EFOF+13+NFLS+FMTSSION+THREAT+TABLE+FILE. D+181+NELS+F MITTER+MUDULATION+TYPE+DATA: EEGIP2+.EEOF+13+NFLS+EMISSION+THREAT+TABLE+FILE. C41824NELS4EMITTER+BANDWIDTH+DATA: #EE9INP+. EEOF+13+NELS+EMISSION+THREAT+TARLE+FILE. C+182+NELS+EMITTER+BANDWIDTH+DATA; EEGIP21.EEGF+13+NFLS+EMISSION+THREAT+TABLE+FILE. "+183+NFLS+EMITTER+CEP+DATA: #EE9INP+. EFOF+13+MELS+EMISSION+THREAT+TARLE+FILE. C+183+NELS+EMITTER+CEP+DATA FEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE: AFETM EE91F21. EFOF+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE. 2-063+8-HELS-ENISSION+START-TIME+DATA: #EE9INPT. LEOF+14+NELS+EMITTER+ACTIVITY+GPOUND+TRUTH+FILE. D+OA3+R+NELS+EMISSION+START+TIMF+DATA; EF91P21. FFOF+14+MELS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE. D+054+NELS+EMISSIOD+STOP+TIME+DATA:#EE9INPT. EEOF+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE. D+064+NELS+EMISSION+STOP+TIME+DATA; EEGIP21. EFOF+14+NFLS+FMTTTER+ACTIVITY+GROUND+TRUTH+FILE. L +073+B+NFLS+F+TTTER+FREGUENCY+RANDWIDTH+DATA I = FF GTNPt. EFOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE. 0+073+5+NFLS+EMITTER+FREQUENCY+RANDWIDTH+DATA; EESTPRT. EFOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE. U+075+6+NFLS+FMTTTER+TD+DATA:=EE9INP+. EFUF+14+NFLS+FMTTTER+4CTIVITY+GPGUND+TRUTH+FILE. D+075+4+NFLS+EMITTER+ID+DATA; EEGIPPT. EFOF+14+NCLS+EMITTER+ACTIVITY+GPOUND+TRUTH+FILE. D+081+B+NELS+EMITTER+THANSMISSION+FREQUENCY+DATA : EFF9ThPt. EFOF+14+AFLS+FMITTEP+ACTIVITY+GROUND+TRUTH+FILE. D+081+B+NELS+EMITTEP+THANSMISSION+FREQUENCY+DATA; EF91P2+.

```
EFOF+14+NELS+EMITYER+ACTIVITY+GROUND+TRUTH+FILE.
    0+082+NELS+EMITTER+VEL+X+DATA: #EE9INPT.
     EEOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     D+082+NELS+EMITTER+VEL+X4DATA,
     LEGIP21.
     EFOF+14+NFLS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     D+083+NELS+EMITTER+VEL+Y+DATA: #REGINPT.
    EEOF+14+NELS+EMITTERGACTIVITY+GROUND+TRUTH+FILE.
     C+083+NELS+EMITTER+VEL+Y+DATA:
     EE91P21.
     FFOF+14+NFLS+EMTTTER+ACTIVITY+GROUND+TRUTH+FILE.
     D+0844NELS+EMITTER+VEL+Z+DATA:=EEGINP+
     EFOF+14+NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     D-084-NELS+EMITTER+VEL+Z+DATA;
     EE91P21.
     REOF+14+NELS+EMITTER+ACTIVITY+GPOUND+TRUTH+FILE.
     G+0A5+8+NELS+EMITTER+X+DATA1#EE9INP+.
     FEOF+14+NELS+EMITTERGACTIVITY+GROUND+TRUTH+FILE.
     DEGRSEBANELS+ENITTER+x+DATA;
    £E9IP2#,
     EFOF+14+NELS+FMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     0+036+6+NELS+EMITTER+Y+DATA1=FLGINPT.
     EFGF414+NFLS4EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     DADREHUMNFLS+EMTTTERAY+DATA1
     EFOF+146NFLS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     SHORTHSHIEL SHEMITTERHITHDATALEEEGINPT.
     EFOF+14+NELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE.
     C4087484NFLS+EMITTER+7+GATA;
     EF9TP21.
     EEOF+14+NFLS+24ITTEP+4CTIVITY+GROUND+TRUTH+FILE.
    A4130484SCENARIC+GEH+ID4NUM+CATA: #EEGINP+
     REOF+14+NFLS+EMITTER+ACTIVITY+GROUND+TRHTH+FILE.
     P+130+3+80ENARID+GEN+ID+NUM+DATA
     EMA
FEOF+15+ RELISHEMITTER+CHARACTERISTICS+FILE:
     ACCY.
     SEVIPST, EFOF#15#KFUS+FMITTER#UNARACTERISTICS#FIGE.
     0+067+NELS+EMITTER+RAMDWIDTH+DATAIMEEGINPT.
     EFOF+15+NFLS+FMTTTER+CHARACTERISTICS+FILE.
     D-067+NELS+FMITTER+BANDWIDTH+DATA;
     EF91P21.EE0F+15+NFLS+FMTTTER+CHARACTERISTICS+FILE.
     0+077+4+NFLS+EMITTER+MODULATION+TYPE+DATA: #EEGINP+.
     EEOF#15#NELS#FMITTER#CHARACTERISTICS#FILE.
     D+077+A+NELS+EMTTTER+MODULATION+TYPE+DATA;
     EF91P2+, EF0F+15+ VFLS+FMITTER+CHARACTERISTICS+FILE.
     DAG784A4NFLS4EMITTER4POWER4LEVEL+DATAIMEEGINPT.
     FFOF+15+NEUS+EMITTEP+CH4R4CTERISTICS+FILE.
     9-078-A-NFLS-EMTTTEP-PCHER-LEVEL-DATA
     ENUT
FEOF+16+NELS+EMITTER+FILF:
     ERGIP2+ REGEOTOLOGNELSOFMITTEROFILE.
     D+063+A+NFLS+EMISSION+START+FIME+DATAIREESINPT.
     EFOF+16+NELS+EMITTEP+FILE.
     D+C63+A+HFLS+EMJSSION+START+TIME+DATA;
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EEGIPPT.EFOF+16+NELS+FMITTER+FILE.

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- Source Listina -
                                 17x Mar = 1983- 17419439---- DISKSUSE
     CEUP+17+NELS+FSTI 44 TED+EMITENHOARAMETERS+FILE.
     DAISOANELSAEMITTERAFREQUENCYARANDWIDTHADATA
     : =EF9INPT.
     EFOF+17+NELS+ESTIMATEO+FMITTER+PARAMETER8+FILE.
    EEGIP24.
     EEUF+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE.
     DATALANELS-EMITTER-THANSMISSION-FREQUENCY-DATA
     :=EESINFT.
     EFOF+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE.
    D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
     END:
FEOF+13+NELS+ESTIMATED+GPOUND+TRUTH+FILE:
    - #£61%-
     ZE9IP2+.EE0F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
     D+068+NELS+EMITTER+CEP+DATA: mEE91NP+.
  - -- EGOF+16+NGLS+ESTIMATED+GROUND+TRUTH+FILE;------
     D-068+NELS+EMITTER+CEP+DATA;
     EE91P21.EE0F+18+NEL5+ESTIMATED+GHOUND+TRUTH+FILE.
    -C+157+NELS+EMISSION+DURATION+DATA1=EEGINPT.
     ZEOF+18+NELS+ESTIMATED+GROUND+1RUTH+FILE.
     D+157+NELS+EMISSION+DURATION+DATA:
  -- EEGIP21-EEGE+13+NELS+ESTIMATED+GROUND+TRUIM+X[LEg. - --
     D-158+NELS+FM15310N+STAR1+TIME+DATALEEGIMPY.
     28 UF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
    - 6-156+NELS+EMISSION+STAPF+FIME+DATA+
     EF91P2+.EE0F+18+NELS+EST1MATED+GROUND+TRUTH+FILE.
     O+160+NELS+EMITTER+ID+DATA # EE91NP+.
     EEDF+18+NELS+ESTIMATED+GROUND+TRUTH+FILE.
     C+160+NELS+EMITTER+ID+D4T1;
     EEGIP21.EEOF+18+NEL84ESTI:41727+GROUND4TRUTH+F%LE.
 EEOF+13+NELS+ESTIMATED+GHOUND+TRUTH+FILE.
     D+162+NELS+FMITTER+X+PATA;
   ---EF9IP21_EF0F#18#NELS#ESTIMATED#GROUND#TRUTH#FILE.
     C+163+NELS+EMITTEP+Y+DATA1=EE9INP+.
     EFOF+18+NFLS+ESTIMATED+GROUND+TRUTH+FTGE,
    - celadeneeseenttlekerebatat
     EFGIPRO.EEOF+18+NELS+ESTIMATED+GHOUNU+TRUTH+FILE.
     UHIGHANGLSHEMITTERHZHDATATHECHIN. ..
ERGEHIBHNGLSHESTIMATEDHGROUNDHT ... HTEF
     D+164+NELS+EMITTEP+7+DATA;
     EFFIF21. EFOF #18 #NELS#KUTIMATEN#UHUUNGU. #U N#FILE.
    -C+165+SCEMARICHCEM+IC+NUMHDATA:=E9INP:---
     EEGF+18+NFLS+ESTIMATEC+GROUND+TRUTH+FILE.
     D-165-SCECAPIN-GEN-TU-NUMBERT
     €개けす
FEOF+19+MELS+FREGUENCY+SCA (+FIL_)
     EEQIP21-EEQE-19-NELS-EHEUUENCY-SCAR-FILE....
     C+CO2+HFLS+FPFH+SCAN+LOWER+FRFH+DATAIMLEGINP+.
     EFOF+19+NELS+FPEWUENCY+SCAN+FILE.
     LAGGZANELSAFRENASCANALUMERAFREDADATAL...
     ERGIPPT. EFOF + 19+NFLS+FRENUENCY+SCAN+FILE.
     Den0344FLS4FREH+SCAM+UPPER+FREG+DATAIREE9INPT.
     REVERSELS FREGILICY SCANFFILE.
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VAX-11 P

WEDGSAMFLISHFREGESTANHUPPERFREQEDATA

EEOF+20+NELS+PRE+BRIEFED+ADI+FILE: BEGIN EEGIP21.EEOF+20+NELS+PRE+BRIEFED+A01+FILE. D+095+NELS+PRE+RRTEFED+A01+FILTERING+CRITERIA+DATA :=EEYTHPT.EFUF+20+NFLS+PRE+RRTEFED+A01+FILE. D+095+NELS+PRE+RHIEFED+ADI+FILTERING+CRITERIA+DATA; EEGIP21.EEOF+204HELS4PRE+BRIEFED+AOI4FILE. D+097+NELS+PRE+BRIEFED+AOI+LOWER+LEFT+X+DATA :=EE9InPt.EE0F+20+NFLS+PRF+BRIEFED+A0I+FILE. DAUSTANELSAPREARTEFED-ADI-LOWER-LEFT-X-DATA; EF91P21.EE0F+20+NFLS+PRF+BRIEFED+A0I+FILE. D+098+MFLS+PRE+ARTEFED+AOT+LOWER+LEFT+Y+DATA :=EEGIAPT.EEJF+204NELS+PRE+BRIEFED+AOI+FILE. U+098+NELS+PRF+9RTEFED+AOI+LOWER+LEFT+Y+DATA; EEGIPST.EEOF+20+NELS+PRE+RRIEFED+AOI+FILE. D+100+NFLS+PRF+RRTEFED+A01+UPPER+RIGHT+X+DATA :=EFYINFT.EFOF+20+NFLS+PRF+RRTEFED+AOT+FILE. D+100+NFLS+PRE+PRIEFED+40(+UPPER+RIGHT+X+DATA) EF91P21. EF0F+20+NFLS+PRE+BKIEFE0+ADI+FILE. 0+101+NFLS+PRF+RRIEFED+ADT+UPPER+RIGHT+Y+DATA :=EFYTHP1.EFOF+20+NFLS+PRE+RRIEFED+A0I+FILE. DelOleNELS+PRE+BRIEFED+ADI+UPPER+RIGHT+Y+DATA E 90: FEAF+21+MELS+PRE+HRIFFFD+SDI+FTLE: SF to I'd EE91921.EE0F+21+NELS+PRE+BRIEFED+SOI+FILE. D+103+HELS+PRE+BRIEFED+SOI+END+FREQ+DATA:=EE9INPT. EFUF+21+NELS+PRE+BRIEFED+SUI+FILE. NEIDSENELSERREFPRIEFERESOIEENDEFREGEDATA: EF91921.EF0F+21+4FLS+PRF+9RIEFED+S01+FILE. DelOWENELSEPREERRIEFEDESOIFFREDEDATAIREEPINPT. EEOF+21+NELS+PRF+BRTEFED+801+FILE. D+104+NELS+PRF+PRTEFE0+SOI+FREQ+DATA; EE91P21.EE0F+21+NELS+PRF+BRIEFED+S01+FILE. 0+105+MFLS+PRE+MRIEFED+SUI+MODULATION+TYPE+DATA :=EF91&P1.EEUF+21+NFLS+PKE+RKIEFED+801+FILE. S+105+NELS+PRE+BRIEFED+SOI+MODULATION+TYPE+DATA; EEGIPST. EFOF+31+NFLS+PRE+PRIEFED+SUI+FILE. D+106+NFLS+PRF+9RIEFED+SDI+START+FREQ+DATAIMEE9INPT. EEGF+21+NELS+PRF+BRIEFED+SOI+FILE. D+106+NELS+PRF+PHTEFED+SOI+START+FRFQ+DATA EECF+24+MELS+TOUA+DO+FILE: EFFIRST LEFOF+24+NFLS+TDDA+DD+FILE. C+353+NELS+DD+1+2+DATAIREE9INPT. EFOF+24+NELS+TOMA+OM+FILE.D+058+NFL8+MD+1+2+DATA; FF9TP21.EF0F+24+NFL9+TDNA+DD+FILE. U+059+NELS+CU+1+3+DATAIREEYINPT. EFOF+24+NFLS+TDAA+DA+FILE.D+059+NFLS+DD+1+3+DATA; EF97P21.EF0F+24+NFL9+TD0A+UD+FILE. D+060+NELS+CU+2+3+DATAIREE9INPT. EFOF+24+NFL9+TUPA+UP+FILE.D+UAO+NELS+DD+2+3+DATA; EFFIP21.EFUF+24+NFLS+TUDA+UP+FILE. JA1094 OFLISHTUDA-1+2+DATAIREFGINPT. FF0F+24+NFLS+TD04+O0+FILE.D+109+NFLS+TD04+1+2+DATA;

VAX-11 P DISKEUSE

CESTERT LEGS -24+NELS+TODA+UD+FILE. 0+110+NELS+TOOA+1+3+DATAIREE9INP+ HEOF+24+NELS+TDOA+DP+FILE.D+11C+NELS+TDOA+1+3+DATA; GEGIP21.EEOF+24+NFLG+TD@A+DO+FILE, D+111+NELS+TDOA+2+3+DAT41mEE9INP+. EEOF+24+NFLS+TOPA+DP+FILE.D+111+NEL8+TDPA+2+3+DATA FNO: FEOF+25+NELS+TYFFD+EMITTEH+RFRORT+FILE: HEGIN EE91P2+,EE0F+25+AFLS+TYPED+EM17TER+REPORT+FILE. D+070+NELS+EMITTER+CDV+DATAImEEGINP+. tEOF+25+NFLS+TYPED+EMTTTER+REPORT+FILE. -+C70+NELS+EMITTER+COV+DATA: EF91P21.EF0F+25+NELS+TYPED+EMITTER+REPORT+FILE. D+074+NELS+EMTTTER+FREQUENCY+DATA: #FEGINPT. REOF+25+NELS+TYPEN+FMITTER+REPORT+FILE. G+074+NELS+ENTITER+FREGUENCY+DATAS tE91P21.FE0F+25+NFLS+TYPED+FMTTTER+REPORT+FILF. Del60+NELS4F+11TER+TU4DATA1BEF9TNP+ EFOF+25+NELS+TYPED+EMITTER+PEPORT+FILE. D+166+NELS+EMITTEP+TD+DATAL EF91P21.EE0F+25+NFLS+TYPED+EH11TER+REPURT+FILF, OHIETHNELSEEMITTERAXADATASEEEGINPA. ERUF+25+NELS+TYPED+EHTTTER+REPDRT+FILF. NATE TAKEL PARMETERS WALLET EF9TP21.EE0F4P54NFLS4.1PED4FAITTER4PEPORT4FILE. D+168+NELS+EMITTER+Y+DATA1=FERINP+, EFOFERSHIPPEDEFMITTER+PEPOPT+FILE. SALABANELSAEKTITERAYADATA: FF9TP21.EF0F+25+NFLS+TYPED+FHITTER+DEPORY+FILE. I WIEGHAELSOFMEISESOFOATALEEGINPT. EROFARSANELSATYPEDAEMITTERAREPORTAFILE. D+169+NELS+EMITTER+7+DATA: ERGIFOT, EECF+754NFLS+TYGED+EMITTER+REGORT+FILE. LATTOASCENARIOAGENATUANUMADATATEERGINPT. EFOF+25+KFLS+TYPEP+FMITTER+PEPORT+FILE. CALTO+SEENARTE+SET TEANSMANGET SE EEGIF21, EROFORSOLDET OTT PEROFE MIRTER OREPORTOFILE. D+176+NELS+EMITTER+RANDWIDTH+DATA: #EE9INP+. EFOF+25+NFLS+TYPEP+FMTTTER+REPCPT+FILF. DA1764NELSAEMITTESARANDWIDTHADATAS EF91P21.EF0F+25+NFLS+TYPE0+EMTTTER+REPORT+FILE. D+177+NELS+EMITTE2+CEP+DATA1=FEGINPT. REGENSON SENTERED SENTERER PREPORTORILE. C+177+LELS+EMITTER+CEF+DATA; FFGIP2+, EFGF+25+GFLS+TYPEF+FMITTER+REPORT+FILE. DAITEANFLSAEMITTERAS COULATIONATYPEADATAIMEEGINPT. ¿FOF+25+HFUS+TYPEP+FMTTTER+REFORT+FILE. +178+AELS+FMITTER+MICULATION+ (YPE+DATA: EFFIP21.LEGF+25+NFLS+TYPED+EMITTER+REPORT+FILE. C+179+NELS+EMITTE9+TIME+GF+LOCATION+DATA: #EE9INPt. EFOF+25+NFLS+TYPED+FMITTER+REPORT+FILE. G#179+NELS#EMITTEP+I1 E+GF+LOCATION+DATA; EF91P2+.EE0F+25+NELS+TYPLO+FMITTER+REPORT+FILF. E+190+NELS+FMITTES+THAFFIC+TYPE+DATAISEFGINPT. EFOF+25+NFL5+TYPEN+FMTTTER+PEPOPT+FILE. U+190+ FLS+EMITTER+THAFFICHTYPE+DATA

```
ENO:
EEOF+26+NELS+WEATHER+CONDITIONS+FILE:
     BEGIN
     EE91P21.EECF+26+NELS+WEATHER+CONDITIONS+FILE.
     D+037+CLOUD+COVFR+DATA:=EE9INPt.
     EFOF+26+NELS+WEATHER+CONDITIONS+FILF.
     D+037+CLOUD+COVFR+DATA;
     EE91P21.EF0F+26+NELS+WEATHER+CONDITIONS+FILE.
     D+039+ELEVATION+WEATHER+DATA:=EE9INP+.
     EFOF+26+NELS+WEATHER+CONDITIONS+FILE.
     C+039+ELEVATION+WEATHER+DATA;
     EEGIP21.EEGF+26+NELS+WEATHER+CUNDITIONS+FILE.
     D+120+PRECIPITATION+DATAIMEE9INPT.
     EEGF+26+NELS+NEATHER+CONDITIONS+FILE.
     D+120+PRECIPITATION+DATA;
     EF9IP2+ .EE0F+26+NFLS+WEATHER+CONDITIONS+FILE.
     D+144+X+WEATHFR+LOC+DATA:=EFGINPT.
     EECF+26+NFLS+NEATHER+CONDITIONS+FILE.
     G+144+X+WEATHER+LOC+DATA:
     EE91P21.EF0F+26+NFL5+WEATHER+CONDITIONS+FILE.
     U+146+Y+WEATHER+LOC+DATAIREEGINPT.
     EFOF+26+NELS+WEATHER+CONDITIONS+FILE.
     DATAGEY - WEATHER + LOC + DATA
     END:
FEOF+27+PLATFORM+CONTROL+FILE:
     EEGIN
     EE91P21.LE0F+27+PLATFORM+CONTRUL+FILE.
     D+01G+ASP+ALTITUDE+DATA:=EE9INP+.
     EFOF+27+PLATFORM+CONTRUL+FILE.
     L+010+ASP+ALTITUDE+DATA:
     LEGIP21.LEOF+27+PLATFORM+COMTGOL+FILE.
     C+014+ASP+LUC+X+DATA1=EE9INPt.
     EFOF+27+PLATFORM+CGNTROL+FILE.D+014+ASP+LOC+X+DATA;
     EEYTP21.EF0F+27+PLATFORM+CONTROL+FILE.
     D+015+ASP+LOC+Y+DATAI=EE9INPT.
     EFOF+27+PLATFORM+CONTROL+FILE.U+015+ASP+LOC+Y+DATA;
     EF9IP2+ EF0F+27+PLATFORM+CONTROL+FILE.
     G+016+ASP+LCC+Z+DATA:=EF9INPT.
     EEOF+27+PLATFORM+CUMTROL+FILE.D+016+ASP+LOC+Z+DATA;
     EEGIP21.LEOF+27+PLATFORM+CONTROL+FILE.
     D+022+ASP+VEL+X+DATAIMEEGINPT.
     EFOF+27+PLATFORM+CONTROL+FILE.D+022+ASP+VEL+X+DATA;
     EF91P2+.EE0F+27+PLATFORM+CUNTPOL+FILE.
     U+025+ASPEVEL+Y+DATA1=EE9INPt.
     EFOF+27+PLATFORM+CONTROL+FILE.D+023+ASP+VEL+Y+DATA;
     EF91P21.LE0F+27+PLATFORM+CONTROL+FILE.
     D+024+ASP+VEL+Z+DATAIZEE9INPT.
     EFOF+27+PLATFORM+CONTROL+FILE.D+024+ASP+VEL+Z+DATA
     E 200 a
EEOF+28+PRIMARY+POADS+FILE1
     BEGIN
     EEGIP21. LFOF+28+PRIMARY+ROADS+FILE.
     D+121+PRIMARY+ROADS+X+DATA1#EE9INPt.
     EFOF+28+PRIMARY+ROADS+FILE.
     D+121+PRIMAPY+ROADS+X+DATA;
     EFGIP21.EFOF+28+PPIMARY+ROADS+FILE.
     D+122+PRIMARY+PRADS+Y+DATAIREEGINPT.
```

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17-Mer-1983 17:42:51
                                                      VAX-11 F
                                17-Man-1983-17419438- DISKBUSE
 Source Lieting ...
     FFUF+28+PRIMAPYGROADSGFILE.
   - 0+122+PRIMARY+ROADS+Y+DATA
     END:
SEDE+29+RATERDAD+LOCATTOMS+FYLE:
   HEGIN -
     EF9TP2+. LF0F+294RAILRHAD+LOCATIONS+FILE.
     D+123+RAILROAD+LOC+X+DATA; #EE91NF+.
     EEOF+29+RAILRGAD+LOCATION8+FILE.
     DE1234RAILROADALDC4Y4DATAS
     EF91P21.EE0F+29+RAILROAD+LOCATIONS+FILE.
     ETOF+29+PAILROAD+LOCATIONS4FILE.
     D+124+RAILROAD+LOC+Y+DATA
    -- END ---
FEOF+30+RIVER+LOCATIONS+FILE+
     BEGIN
     EE41P24.EE0F4104RIVER4LOCATIONS4FILE.
     D+1284RIVFR4LCC+x+CATA:aEE9INF+.
     EFOF+30+RTVER+LOCATIONS+FILF.DAIRAHRIVER+LOC+X+DATA;
  <del>----EF9IP2+_EF0F+30+RIVER+L0GATIONS+FILE_-</del>
     D+129+RIVER+LOC+Y+DATA: REE91NPT.
     EFOF+30+RJVER+LOCATIONS+FILE, D+129+RJVEF+LOC+++Days
  ---E40+ ---
FEOF+31+SECONDARY+ROADS+FILE:
     SEGIN
 EEGIP21.EEGF+31+SECONDARY+ROADS+FILE.
     D+131+SECONDARY+RDAD+X+DATAIREE9INP+.
     EEOF+31+SECONDAPY+ROADS+FILE.
     D-131-SECONDARY-POAD-X-DATA:
     EFRIPZT.EFOF4314SECHNOSRYARGADS4FILE.
     0+132+SECONDARY+ROAD+Y+MATAIMEEGINPT:
     EFCE+31+SECONDARY+ROADS+FILE
     D+132+SECONDARY+ROAD+Y+DATA
     END:
FENF+32+SENSOR+ORBIT+MODS+FILE1
     BEGIN
     EEGIP21, EFGF4324SENSUR4DRRITHHODS4FTLE
C41174PLATFORMAMODAYADATAFEE FINRY.
     EFOF+32+SENSOR+ORAIT+MODS+FILE.
     D-157+PLATFORM+MOD+X+DATA:
  EF91P2+, EF0F+32+SENSOR+CRATTERCOUPFILE,
     D+118+PLATFORM+MON+YMNATAIRELSILLI
     EEOF+32+SENSOR+ORFITT-FOOS+1115;
EE91P2+.EE0F+32+SENSOR+ORBIT+MUDS+FILF.
     DeligePlatforMeModeZeDATA:#F501NDS;
EEUF4324SENSOR4ORRITAMODS4FILE.
     P+119+PLATFORM+MODE74DATA
     END;
FEOF+33+SENSOR+PLATFORM+LOCATION+FILE:
     REGIN
     EE91P21.EF0F+33+SENSOP+PLATFORM+LOCATION+FILE.
     DellasplatformelocationexedataseEginps. ..
     EFOF+33+SENSOR+PLATFORM+LOCATION+FILE.
     C+114+PLATFORM+LOCATION+X+DATA;
     LEGIPPT. LEGOF+33+SENSOR+PLATFOPM+LOCATION+FILE.
     D+115+PLATFORM+LOCATION+Y+DATATHEEGINPT.
```

```
17-Mar-1983 17:42:51
                                                                    VAX-11 F
                                           17-Mar-1983 17:19:39
                                                                    DISKSUSE
         - Source Listing ---
               LEOF+33+SFNSUR+PLATFORM+LOCATION+FILE.
               D+115+PLATFORM+LOCATION+Y+DATA;
               EE91P2+.EE0F+33+SENSOR+PLATFORM+LOCATION+FILE.
               D+116+PLATFORM+LOCATION+Z+DATA: EEE9INPT.
               EFOF+33+SENSOR+PLATFORM+LOCATION+FILE.
               D+116+PLATFORM+LOCATION+Z+DATA
               END:
         FEOF+34+SENSOR+STATUS+FILE:
               BEGIN
               EE91F2+.EE0F+34+SENSOR+STATUS+FILE.
              D-OH44FRECUENCY-SCAN-PARAMETER-DATA: EEGINP+
               EFOF+34+SENSUR+STATUS+FILE.
               0+044+FREQUENCY+SCAN+PARAMETER+DATA;
           EFGIP21 EEOF+34+SFNSOR+STATUS+FILE
               C+136+SENSOR+MODE+OF+OPERATION+DATA: #EE9INPT.
               EEOF+34+SENSOR+STATUG+FILE.
            Del364SENSOREMODE+OFEDRERATION+DATA
         F
 - ENG (* FÉECRYIN *);
PROCEDURE EERIJEAC(EE9DSI:EE7DSLST);
  HEGIN
    CASE FERUSI OF
          FEINCUS:
       INTO MELS SENSOR:
               BEGIN
               EESININ(
              __MOOI+ES+NELS+UNIT+AND+ENVIRONMENT+DATA+MSG+IN);
               EESTHING M+02+MELS+CARTO+UPDATES+MSG+IN);
EESHHING M+03+MELS+COMMANDERS+REQUIREMENTS+MSG+IN);
              EERIMING MEDULANELSEMODIFIEDETASKEMSGEIN);
               EF8!NIN( M+06+NELS+OP8IT+MODIFICATIONS+MSG+IN);
               EEGINTN(
               M+OR+NELS+PRIORITIZED+SENSOR+DIRECTIONS+MSG+IN):
               EFSTNIN( M+09+NELS+REQUESTED+SENSOR+DATA+MSG+IN);
               FFRINTS( M+15+T+AND+C+STOP+NELS+MSG+IN)
              END:
          TOFITHINGEAND+CONTROL+FROMENELS:
               BEGIN
               EEBILIM
               *+05+NELS+NON+SHRVETLLANCE+TARGET+REPORTS+MSG+DUT);
               DETMISSE
               M+07+MELS+PLATFORM+LOCATION+REPORTS+MSG+OUT):
               EFRINING M+10+NELS+SENSOP+REQUESTS+MSG+OUT);
EFRINING M+11+NELS+SENSOP+SVETEMARYATIO
                        M+11+MELS+SENSOR+SYSTEM+STATUS+MSG+OUT);
              LEGINITION
               ++12+1ELS+SURVETLLANCE+TARGET+REPORTS+MSG+OUT);
               EEBINTN( Y+13+NELS+TASKING+RESPONSES+MSG+OUT);
            EEBINING MOTHENELSOTRACKOMESSAGEOMSGOUT)
          EDD
    END (* EESTIFAC *):
PROCESHEE FEEFOCAL:
     V 2 --
                        :EE7LSLST;
     55674
                                     E-108
```

FISH # THORK ("TO THE DATA=SET/CLASS DESCRIPTION ARRAY, EE9DS#)
TO THE DATA=SET DESCRIPTION PLOCK WHICH POINTS VIA #)
THE THE INSTAUCE TO BE REMOVED. #)

こまだらりまつとておま

(★

(•

5 E 1 1 1 1

"P := fenne("Stl,(f*)
FECOS("STl,(Th. := OMf.FL)%;
"F :pr*,Ft)* <> '' Time'

```
17-Mer-1983 17419439
                                                                                                                                                                               DISKSUSF
                    ----- Source-Listing-
                        OPT.FLNKT.RLNK 1= OPT.RLNK
        .. ELSE EEGDS TOS IT EOI += OPT .RLNK;
           IF OPT. RLNK <> NIL THEN
                        OPT. HLNKT. FLNK := OPT. FLNK
            ELSE EE955 (US1) . HOT 1= OPT. FLAK
            END (* EFALAKULT *);
PROCEDURE EESLINKIN(VAR DS:EE7DSTYP; INP:EE7INPTR);
(* DESCRIPTION:
                      EEBLAKIH INSERIA A NEW INSTANCE INTO A DATA-SET LINKED LIST. A)
( ±
( INPUTS:
                        DS - DATA-SET DESCRIPTION BLOCK IN WHICH CIN POINTS TO THE *)
( *
                        INSTANCE IN FRONT OF WHICH A NEW INSTANCE IS TO BE PUT. #)

IMP - POINTER TO THE INSTANCE TO BE INSERTED. #)
( ±
(+
VAR
                                               :FETINPTR:
           PEGIN
            OP := DS.CT 4;
            INPT. FLNE 1= OP;
            IF UP es hit THEN
                        BEGTH (* CHRRENT INSTANCE IS NOT AT FOI *)
                        INP+.FLNK := OP+.FLNK;
                        IF OPT.FLAK <> NIL THEN
                                   TOPT FLMAT FLMA := THP
                        FESF PS.BCI := THP;
                        CPT. RENY := INP
                        E 110
            FLSE REGIN (* CHRRENT INSTANCE TS AT FOI *)
                        IMP+.SENK := DS.EDI;
                        IF OS.EOT <> MIL THEN

GEOLY (* DATA-SET IS NOT EMPTY *)
                                    DS.ECIT.FLNK := INP;
                                    DS.ECI := TAP
                                    FAR
                        ELSF SEGIA (* DATA-SET IS EMPTY *)
                                    PS.SET := IMP:
                                    FS.ECI 1= INO
                        ENDS
            PS.CIN := TAP
            END (* EFSLARIA *);
(AVAX PRODUCTED TO THE 
                                                                                                                                                                                      VAX+)
PROCEDURE EEGKUPYOST VAR OST: EETOSTYP; VAR DS2: EETOSTYP);
(* DESCRIPTION:
                                                                                                                                                                          * )
                        LEBROPYDS CREATES A COPY OF AM INPUT DATA-SET.
(*
(* IMPUTS:
                                                                                                                                                                          +)
                        DRI - DATA-RET PESCRIPTION PLACK FOR DATA-SET WHICH IS TO BE#)
(+
                                  COSTEU.
( +
                                                                                                                                                                          *)
                        US2 - DATA-SET MESCRIPTION BLOCK FOR DATA-SET WHICH IS TO
                                                                                                                                                                          ±)
( A
                                   RECEIVE THE COPY (MUST BE EMPTY).
                                                                                                                                                                          *)
(*
CONST
                        UC1 =
                                                                                                                                                                          • •
          *4241 DATA-SET BEING CUPIED INTO IS NOT EMPTY
                        CIPMIANO REETINGTHE
            "ECIN
            CI := 981,891;
            IF (ASP. TOT 4> WILL ON (OSP. FUT 4> WIL ) THEM
```

17-Mer-1983 17:42:51

VAX-11 P

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17-Mar-1983 17:42:51
                                                                        AYXOTE :
                                                17-Her-1983 17:14:34
                                                                       -DISKSUSE
     ------ - Source Efeting
         BEGIN (* OUTPUT DATA-SET IS NOT EMPTY *)
         EE8ESTOIAG( DCL ) -
    ELER DESIR (A CUTPUT DATA-SET IS EMPTY #)
         SSS SEA FR ATLE
         No se wills
          AMBLE CI <> NIL DO
              REGIA
              FERNFWI(NI , CIT. INTYP);
              NIT.DSTYP := CIT.DSTYP;
              FERENKIN(082,NI)+
              FEFCPYTH(CI,NI);
               IF CI = DS1.CIN THEN MC:= NI;
              DS2.CIN 4= NIL+
              CI #= CI:.FLNK
              ENDS
         USE.INGNT:#OSI.INGNT;
CS2,CTA &# NC
         c 1-0
    ENG (* EFBEGRYDS *);
PROPERTY ENGLES
(+ 108 SQUARTO 1 24 (6 ELS UPOSH COPIES DATA+SP1 DESCRIPTION BLOCK CONTENTS PHOM 83
         GAL BLOCK-TO ANOTHER.
(*
                                                                      m )
(* [NPUT5:
                                                                      ±)
         USI - IMPLI OR SOURCE DATA-SET PESCRIPTION BLOCK.
(*
                                                                      *)
( ±
         DS2 - GUIPUT OR CESTINATION CATA-SET DESCRIPTION BLOCK.
    و المراجع ا
     182,501
    i= 051.801;
     OS2.INSIT
               := OS1.INSTT;
    DS2-INTYE
               I I DS1 INTYP
               ; =
     "SP.DSTY>
                    OS1.OSTYP;
     · $2.1 1 *
                : =
                     OSt. INCHTS
              187.75419.
     1.52.1.150
    FNP (* EtbagPosm *);
0.4 {
m kg} ) and the second continues are also as the second continues of the 0.4 {
m kg}
                                                                           VAY# 5
PROCEFURE ERAKENE INP! FETINATA );
(* SESCRIPTIONS
         EEHYPO COPIES EITHER DATA-SET OFSCHIRTION BLOCK CONTENTS A) (FILES CARED BY ENTITIES) OF TATA-SIT ANSTANCE; **TLES OWNED BY MESSAGES) FOR ALL FILES OWNED BY AN INSTANCE; *)
(*
( *
( ±
(* INCUIS:
         THE - POINTER TO THE INSTANCE WHOSE FILES ARE TO BE COPIED. 4)
( *
        . uc1 =
    *-181 ATTEMPT TO DESELECT UNNING INSTANCE INSIDE FOR*EACH ON FILE *;
         005 =
         FATAL TO SIMULATION EXECUTION
447
         050
                   IFE TUSPTR;
                   :FETUSLST;
         CLS
     *EGIT
    "SP := IMPT. FSI WK;
                                        E-11!
```

```
17-Mar-1983 17:42:51
                                                                    VAX-11 P
     .... Source Listing
                                              17-Mer-1983 17+19+39 -
                                                                    DISKCUSE
     CLS := EF90S(INP+.DSTYP1.CLASS:
     AHILE OSP 45 HIL DO-
          BEGIN (* TRANSFER ONE DATA-SET OUT *)
          EFBUDSS(DSP+.OSTYP);
            - CLS = EFITATEL THEN
              PEGIN (* PESSAGE INSTANCE *)
              EERKOPYDS(FE90S(DSP1.DSTYP), DSP1)
          ELSF REGIN (* FILE OR ENTITY INSTANCE *)
              IF EF90S (USP1.DSTYP) .FFLCT 4> 0 THEN
                  HEGIN (* FILE IS LOCKED BY A FOR-EACH *) ...
                   EF8LSTDIAG(DC1):
                   EFALSTOTAG(CC2);
                ..... HALT. ... ... ... . ...
              EEAKOPOSH(EE9US(DSP1.DSTYP), DSP1);
             ...FERIANS(..EE9DS(DSR+_DSTYR)...)
              FSO:
          USP := FSFT.NYTES
     END (* EFEXFO *);
VAX*)
PROCETURE EFRAFI( I'F: EETINFTR);
(* nE3Colpit(m:
... (*... LEEXHI COFIES CONTENTS OF DATA-SET DESCRIPTION BLOCKS INTO *)
          THE DATA-SET/CLASS DESCRIPTION ARRAY FOR ALL FILES OWNED BY #)
(*
         AN INSTANCE.
(* INPUTS:
         IAP - POINTER TO THE INSTANCE WHOSE FILES ARE TO BE COPIED #)
         001 =
    14201 DATA-SET HEADER BEING LOADED INTO FROM INSTANCE IS NOT EMPTY!
                 :EE7DSPTR:
VAR
     BEGIN
     DSP .= INPT.DSLNK.
     AHTLE OSP <> NTL 00
          BEGIN
  IF (EF9DS (DSP+ DSTYP) BOT <> NIL ) THEN
              REGIA (* DATA-SET HEADER IS NOT EMPTY *)
              EERLSTDIAG(OC1);
              EERDESINCEEPOS (DSP1.DSTYP))
              FNP
          EFERGPOSHIOSPT, EEGUS [PSPT. DSTYP1];
         EESINDS( CSP1);
          DSP := PSP+ NXTDS
          END
     ENT (* EFRXFI +)+
 VAX+)
PROCEDUPE FERNATING DSI: FETDSUST ):
 (+ DESCRIPTION:
          EEBNXTIM CISPOSES OF THE INSTANCE POINTED AT BY CIN IF IT 18#)
 (*
11
          MARKED AS DELETED (DLIDS>TRUE) AND NO FOR-EACH IS EXAMINING A)
 ( *
          IT (CHIPES). EERNXTIN ADVANCES CIN TO THE NEXT VALID
          INSTANCE (NOT DELETED), DISPOSING OF INSTANCES WHEN POSSIBLE#)
( *
          ALONG THE MAY.
 ( * INPUTS:
                                                                   *)
```

```
17-Mer-1983 17:42:51
                                                                    VAX-11 F
                                             17-Mar=1983 -1741-9137
              Sayred Cigner
                                                                 - DISKSUS:
(*
         DSI = IPDEX INTO THE DATA-SET/CLASS DESCRIPTION APRAY TO THE#)
              DATA-SET DESCRIPTION BLUCK WHOSE NEXT VALID INSTANCE IS+) ---
į 4
              TO BE SELECTED.
         N7 Et.
                  1900LEANS
         VBE C
                1-147EGEP1-
         AFCICK
                  :ROOLFAN:
         CTNC
                  :EETIMPTR:
    PERIM TRUE :
    PECHOR := TRUE;
   76EC 1= 44
    PHILE INDEC < 2) OR (RECNOK) DO
         HAGYN (* EXAMINE CURRENT INSTANCE THEN NEXT INSTANCE *)
         IF FERDS (DSI) CIN - AND THEN----
              "EGIN (* THSTANCE IS PRESENT *)
              IF EF9%SIDS11.CINT.DLT% THEN
                  SEGIN (* INSTINCE IS DELETED *)
                  PECHON:= TRUE;
                   IF ELODS [PS]] .CIN+, CNTR # 0 THEN
                      PEGIN (+ THSTANCE CAN BE REMOVED +) ----
                       MOEL:= FALSET
                       CINP:= EF9DS:OSI1.CIN;
                 ERROTSI (CINP)
                  £340 - ---
              ELSE RECNOR := FALSE:
              49FC := 48EC + 11
              IF. (AMEC. < .2) OR LCHECNOX) THEM
                   IF MUEL THEM EEGDS (DST) . CIN: #EEGDS (DST) . CINT. FLNK
                 END
        -ELSE-BEGIN---(* NOTANGE-18 ABSENT *) - - -
              1980 := 2;
              MERMEN := FALSE
              EAS .... ....
         E . )
    FOR (* EFB\YTIN *);
 VAX#)
PROTE THE EFRIERS;
(* DESCRIPTION:
         EFBIDSS UPLATES THE CURRENTLY SPLECTED INSTANCE OF A DATA- +)
SET OF CREATES A NEW INSTANCE OF A DATA-SET OF DOES NOTHING +)
( •
.
         DEPOSITIO GM. THE CURRENT INSTANCE STATUS, INSTT. OF A DATA- A)
1 #
         SET, FERUNSS MAINTAINS THE PROPER OPDERING OF DATA-SET
1 .
                                                                  * )
( *
         I'STAICES FOR BOTH RANKED AND FIFO SEQUENCING.
                                                                  *)
(* Infuts:
         DSI - INDEX INTO THE DATA-SET/CLASS DESCRIPTION ARRAY TO THE*)
( *
             MATA-SET DESCRIPTION BLOCK WHOSE CURRENT OR NEW
                                                                  *)
         INSTAUCH ITS TO BE UPDATED OR CREATED.
( *
                                                                  4)
   5 T
         151=
   1-321 CATE-CET INSTANCE STATUS IS OLD BUT NO INSTANCE PRESENT.
                  :FE7USTYP;
                  FETT PTP:
                                     E-113
```

```
DISKSUSE
          --- Source Listing
                                               17-Mer-1983 17:19:39
                 IFE7CMPR 1
      KYC
     --<del>81</del>--- ---
                 #ROOLEAN #
BEGIN
OS 1= EEODS[DSI];
-IF-(DS, INST! = EFOOLO) THEN
      HEGIN (* OLD INSTANCE *)
      IF PS.CIN <> NIL THEN
           BEGIN (* INSTANCE IN PRESENT *)
           IF (NUT PS.CINT. DLTD) THEN
                 SEGIN (* VALID OLD INSTANCE - STORE IT #)
                 KYC := EEAKYCMP(DS.CIN);
                 IF (KYC = EF6EUL) OR (KYC = EE6UNO) THEN
                      REGIN (* KEY UNCHANGED OR UNORDERED DATA-SET *)
                      EEAXFOL DS.CIN);
                      EEAXIO( DS.CIN )
                      FND
                 ELSE REGIN (* KFY CHANGED *)
                      EEPUSIDSTI.CTN := FE9DSIDSTI.BOL:
                      GL := TRUE;
                      WHILF (EE9DS(DSI).CI!! <> NIL) AND (BL) DO
                           HEGIN (* FIND NEW POSITION *)
                            IF EE90SIDSII.CINT.DLTD THEN
                                 FERNYTIN(DSI);
                            IF ELPOSIDSTI CIN <> MIL THEN
                                 BEATH
                                 IF FERKYCMP (EE9DS (DSI) .CIN) =
                                            FEAGTN THEN BLISFALSE
                                 FLSE EFBNXTIN( DSI)
                           £ 401
                      TF EF90S10811.CIN <> DS.CINT.FLNK THEN
                           BEGIN (* RELOCATE INSTANCE TO NEW POSITN*)
                           EE8NEWI(IP, DS.CINT.INTYP);
IPT.OSTYP:= DSI;
                           EEBLAKIN(EE9DS (DSI), IP);
                           EEBXIO( EF9DS (DSI), CIN );
                           EEBAFO( EF905 (OSI) .CI4 );
                           EE90SIDSII.CIN := DS.CIN;
                           DS.CINT.DLTD := TRUE
                           END
                      FLSE BEGIN (* NEW POSITION IS SAME AS OLD *)
                            EE90S(051).CIN ## DS.CIN;
                           EFBYFOC DS.CIN 1;
                           EEBYID( US.CIN )
                           END
                      END
                 END
      ELSE GEGIN (* ULD INSTANCE NOT PRESENT *)
           EEELSTDIAG( OC1 )
           END
      EF90S (USI) . TNSTT := EF6NULL
      £ (i)
 FUSE IF (US. 14STT = FEANEW) THEN
           REGIN (+ NEW INSTANCE - CHEATE IT +)
           FEGOS (PST) CT4 1= FEGUS (PST) . HOLD
           AL := TANE!
```

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VAX-11 F

```
17-Mar-1983 17842151
                                                  17-Mar-1983 17119639
                                                                            DISKEUSE
                Source Litetine
               AMILE (EE90S10817.CIN <> NIL) AND (BL) DU
                    HEGIN (* FIND POSITION *)
                     IF FE908 (DSI) . CIN+. DLTD THEN
                          EEBNATING DSI ):
                     IF FE90810811.CTN 4> NIL THEN
                          BEGIN
                          KAC 1= EEBKACWL(EEdD2(D21)*CIN)!
                          IF KYC # EFORTN THEN BL ## FALSE
                          FLSE IF KYC . EEGUNO THEN EE908 (DSI) . CIN1=NIL
                               ELSE EERNYTIN( DSI )
                    END:
               FERNEHT (IP. EEODS (DSII. INTYP):
               IST RETYP 1= DSI:
               FERENKIN (EE9DS (DSII, TP);
                LEPXTO( EE 905 [OSI] .CIN);
               FERREC EE908 (DSII.CIN );
               FERDS (OSTI.INSTI IE EEANI'LL
               ENF
     END (* EFBUURS *);
(+Y4X ------EE8IJPDATE
                                                                               VIII .
PROCESURE ENABROATER (*(OSI:EETOSLST)*)
   0.0001011101
          ENDIFFRITE UPDATES A DATA-SET OR CLASS BY MAKING APPROPRIATE AS
          LALIS TO EERHOSS. THE CURRENTLY SELECTED DATA-SET OF A CLASSA) IS DECATED FOR INPUTS WHICH ARE ENTITY-TYPES OR ENTITY-CLASSA)
( *
          -₹S.
(+
(* [MPUTS:
          UST - 1 MEX INTO THE DATA-SET/CLASS DESCRIPTION ARRAY TO THEAD
{ *
                STATE OF CLASS DESCRIPTION PLOCK AHOSE CURRENT OR
                                                                          . 1
1.
                NEW INSTANCE IS TO BE UPDATED OR CREATED.
                                                                          £ }
[ #
          001 =
CONSI
    14001 NO SET TYPE FOR A NEW ENTITY-CLASS INSTANCE
                     IFE70STYP;
          CL
     GECTH.
     THE EFFORM STORES THE
          SEGIN (A UPGATE A CLASS A)
          CL 1= 55905(0511)
              CL.COS <= CL.EOC THEN
REGIN (* UPDATE THE SELECTED TYPE *)
                FERUMSS( CL.COS )
                FNC
          ELSE REGIL (* NO TYPE SELECTED *)
                  CL. NEW THEN
                     BEGIN (A NEW INSTANCE WITH NO TYPE #3
                     EFSESTUTAGE DC1 )
                     F *1.
          £1.5
     FLSE SEGTN (* LPDATE A DATA-SET *)
           IF FERDS (CSII.CLASS > EEIINTCL THEN
                BEGIN IN UPDATE AN ENTITY-TYPE #1
                CL 1# FE90SI EF90ST0SI1.CL#SSI:
                TE CE.COS «# CL.EUC THEN
                     AFGIN (* UPPATE SELECTED ENTITY #)
                     EFROUSSE CL.COS )
```

VAX-11 F

```
17-Mar-1983 17:42:51
                                                                      VAX-11 P
                                               17-Mar-1983 17:19:39 -- DISKSUSE
     --- Source Listing
                   END
    FLSE BEGIN (* NO ENTITY-TYPE BELECTED *)
                   IF CL. NEW THEN
                        BEGIN (* NEW INSTANCE WITH NO TYPE *)
                        EERLSTDIAG( DC1 )
                        END
       ELSF REGIN (* UPDATE A FILE OR INTERFACE *)
              EERUDSS( DSI )
         END
    END (* EFBUPDATE *);
FUNCTION EEBENDS (DSI: EETDSLST): BOOLEAN;
(* DESCRIPTION:
       - LEGGRIDS RETURNS A VALUE OF THUE IF A DATA-SET IS AT END (CIN+)
         =MIL) OF IF A CLASS IS AT END (CDS>LAST DATA-SET OF CLASS) +)
( *
         OTHERMISE EFBENDS RETURNS FALSE.
(* INPUTS: ...
         DSI - INDEX INTO THE DATA-SFT/CLASS DESCRIPTION ARRAY, EE9DS#)
(*
              . TO THE DATA-SET OR CLASS DESCRIPTION BLOCK WHOSE END-+)
(+
           .... STATUS IS TO BE CHECKED.
    REGIN
    IF EE9DS (USI) . CSKIND # LEGGLASS THEN
         BEGIN .. (* CLASS *).
         EFBFNDS := EE9DS [DSI].CDS > EE9DS [DSI].EOC
         END
    ELSE BEGIN (* DATASET *)
         EE8FNOS := FE9USIDSII.CIN = NIL
  .. END (* EFBENDS *);
                                                                         VAX#)
PROCEDURE EEBFIRST(CST: EE7USLST);
(* DESCRIPTION:
      EFBFIRST SELECTS (SETS CIN TO) THE FIRST INSTANCE OF A DATA+) ... SET- OR SELECTS (SETS CGS TO) THE FIRST DATA-SET OF A CLASS+)
(*
(*
        AND THE FIRST INSTANCE WITHIN THE DATA-SET.
(* INPUTS:
L±.
      . TO THE DATA-SET OR CLASS DESCRIPTION BLOCK WHOSE FRST+)
(*
              THSTANCE IS TO BE SELECTED.
    HEGIN
    IF EE90S(D91). CSKIND = EE6CLASS THEN
         BEGIN (* CLASS *)
         EE9n8.10311.CDS := EE9D8.10811.BUC+
         EESFIRST (FEROS (NST1.CDS);
         IF FERENDS (FEROS (PSI) COS) THEN ERBNEXT (DSI)
         END ____
    FLSE BEGIN (* DATA-SET *)
         IF EE908 [PSI].CIN <> NIL THEN EFBNXTIN(DSI);
         EE90S (OSI) .CIN := EE90S (OSI) .BOI:
         IF FEGUS (PSTI .CIN <> NIL THEN
              IF EF905 (USI) . CINT. DLTD THEN EE8MXTIN(DSI);
         IF (NOT EESENDS(DSI)) THEN FERXII(EE9DS(DSI).CIN)
```

```
17-Mer-1983 17:42:51
                                                                    VAX-11 F
                                             17-Mar-1983 17:19:39 DISKSUS
    END (* EFBFIPST *);
 :*VAX ==========EBNEXT
 PROCEDURE LEBNEYT:
.. (* DESCRIPTION
          EFBMENT SELFCTS (SETS CIN TO OR CIN AND COS TO) THE NEXT
          INSTANCE OF A DATA-SET OR CLASS. IN A CLASS, SELECTION
 1 +
         - SWITCHES FROM THE END OF ONE DATA-SET TO THE BEGINING OF THEAD
          NEXT WITH NO INDICATION UNTIL THE END OF CLASS.
 ( *
                                                                  *)
 (* INPUTS:
       DSI - INDEX INTO THE DATA-SET/CLASS DESCRIPTION ARRAY, EE9DS+)
-----
               , TO THE DATA-SET OR CLASS DESCRIPTION BLOCK WHOSE NEXT#)
               INSTANCE IS TO BE SELECTED.
CRASI DC1=
     '4061 SELFCT MEXT WITH NO SELECT FIRST OF WITH NO FOUND CHECK
                 : GOOLEAN;
          æL
BECTA
     IF EF90S (DRI) , OSKIND = EE6CLASS THEN
          BEGIN (* CLASS *)
          IF FERENDS (DSI) THEN
               BEGIN (* NEXT WITH NO FIRST OR NO FOUND CHECK *)
               EEBLSTDIAG( DC1 )
              END
          ELSE REGIN (W NOT END UP CLASS *)
               9L := TRUE;
               WHILE (BL) AND (NOT EERENDS(DSI)) DO
                   BEGIN (* SELECT NEXT INSTANCE *)
                   IF (NOT EESENDS (EE9DS (DSI), CDS)) THEN
                       EEANEXY(EEODS(DST),CDS); -
                   IF (NOT EEBENDS(EF905(DSI),CDS)) THEN
                        BL := FALSE
                   ELSE REGIN (* SELECT NEXT ENTITY-TYPE *)
                        EE90S(DSI).CDS:=SUCC(EE9DS(DSI).CDS);
                        IF EE9DS (DSI) . CDS <= EE9DS (DSI) . EOC THEN
                             LESGIUST(EE9DS(DSI).CDS);
                             IF (NOT EEBENPS(EE9DS(DSI), CDS)) THEN
                               END
                   END
          END
     ELSE BEGIN (* DATA=SET *)
          IF EEREPOS(DSI) THEN
               PEGIN (* NEXT WITH NO FIRST OR NO FOUND CHECK *)
      FERLSTDIAGI CC1 )
          ELSE BEGIN (+ NOT END OF DATA=SET +)
               FERNXTIN(DSI);
               IF (NOT EEPENDSIDSI)) THEN EEBXII(EE90S(DSI).CIN)
               END
         _END_
     END (* EFBHEXT *);
 FUNCTION EERFOUND (DRISEFTDSUST): BOOLEAN;
 ( * DESCRIPTIONS
                                      E-117 ...
```

```
17-Mar-1983 17:42:51
                                                                       VAX-11 F
                                            --- <del>17=Mer=1983 17:19:39</del>
                                                                      DISKSUSE
                Source Listing ....
          EEBFOUND RETURNS TRUE IF THE SELECTED DATA-SET OR CLASS
          IPSTANCE IS FOUND, FEBFOUND TRANSFERS FOUND-INSTANCE-OWNED- +>
          FILES INTO THE DATA-SET/CLASS DESCRIPTION ARRAY. EESFOUND
( *
          RETHRNS FALSE IF IT DOES NOT RETURN TRUE.
                                                                     *)
(* INPUTS:
( *
          DSI - INDEX INTO THE DATA-SET/CLASS DESCRIPTION ARRAY, EE9DS#)
               , TO THE DATA-SET OR CLASS DESCRIPTION BLOCK WHOSE
( *
               FOUND-STATUS IS TO BE RETURNED.
._(*
VAR
          FOUND
                    :BOOLEAN:
     REGIN
     FOUND 12 (NOT EEBENDS(USI));
     FERFOUND := FOUND:
     IF EE908 (091) . OSKIND = EE6CLASS THEN
          SEGIN (* CLASS *)
          IF FOUND THEN
               BEGIN
               IF (NOT EERENDS (EEODS (DSI) CDS)) THEN
                    HEGIN
                    EF905 (EE905 (DSI) .CD9) .INSTT := EE60LD:
                   LEBXFI(EE9DS(EE9DS(DSI),CDS),CIN)
                    END
               END
          ENO.
     FLSE BEGIN (+ CATA-SET +)
          IF FUUND THEN
             __REGIL_
               IF EF90S (DSI) . CLASS > EE1 INTCL THEN
                    BEGIN (* SELECT ENTITY TYPE IN CLASS *)
                    EF9DS (EE9DS (DSI) CLASS) CDS += DSI
                    END:
               EE905[DSI].INSTT := FE60LD:
               EEEXFI(EE9DS (DS11.CIN)
          END
  END (* EFSFULINE *):
                                                                          VAX+)
POCCEPUPE EESCINDS( INP : EETINPIP ):
( DESCRIPTION:
         EEBPIHOS DESTROYS ALL INSTANCES OF ALL DATA-SETS OWNED BY ANA)
(*
(1
         INPHI INSTANCE.
(* INPUTS:
                                                                     *)
(*
          I'P - POINTER TO THE INSTANCE DYNAMIC RECORD WHOSE OWNED
                                                                     *)
             FILES ARE TO BE EMPTIED.
(4
                                                                     *)_
          DSP
VAR
                    :FETDSPTR;
     MEGIN (+ DESTROY ALL DATA-SETS ASSOCIATED WITH ONE INSTANCE +)
  OSP IN TUPE OSLAKI
      THILE DSD CO NIL DO
          SEGTO (* PESTROY ONE DATA-SET +)
         EE850SIM( USP1 )+
          USP := DSPt.KXTCS
          END
    ENT IN EFECTION +):
                                                                          VAX+)
PROCEDUTE ESSOUSING
(+ DESCRIPTION:
                                      E-118
```

```
17-Mar-1983 17842851
                                                                          VAX-12
                Source Listing
                                                 17-Mar-1963 17:19:39
                                                                          DISKSUSE
          EFBODSIN DESTROYS ALL INSTANCES OF AN INPUT DATA-SET.
                                                                        *)
*}
          DS - DATA-SET DESCRIPTION BLOCK FOR THE DATA-SET WHOSE THE
                                                                        2)
               STANCES ARE TO BE DESTROYED.
                                                                        *)
          984.≭=-
                                                                        " ;
      THE INSTANCE TO BE DESTROYED IS LOCKED BY A FOR-EACH
          Cterii
                  IFFTINFTR:
     TRAST CALLESTACY ALL INSTANCES ASSOCIATED WITH DNE DATA-BET 4)
     HILE CI . MIL DU
          SEATH (* DESIRBY ONE INSTANCE A) OF CIT, CNTR <> 0 THEN
               REGIN (+ INSTANCE IS LOCKED BY A FOR-EACH +)
               FERLSTDIAG(UC1);
               HALT
               FACS
          CTL I= CIT.FLNK;
          40801108( CT );
          READTRIC CI ):
          St += Gt1
```

Source Listing

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EERINDS(DS)
END (* EEBODSIN *);

```
VAXA:
1906E0JHE EE6003H1
14 DESCRIPTIONS
      - EESPUSH DESTROYS THE DATA-SET DESCRIPTION BLOCKS OF ALL
        DATA-RETS OWNED BY AN INPUT INSTANCE.
 4 INPUTSE
                                                                *)
. i 🛎 ---
    * }
             FILES ARE TO HAVE THEIR DATA-SET DESCRIPTION BLOCKS
(*
                                                                •)
( *
             DESTROYED.
CONST -- DC1 =
   *4301 DATA-SET HEADER TO BE DESTROYED IS NOT EMPTY
         USP, USP1 : EE70SPTR;
    BEGIN (* DESTROY ALL DATA-SET HEADERS LINKED TO AN INSTANCE *)
    OSP : I IPT. DSLNK;
    WHILE OSP 40 NIL DO
     ---- HEGIN (#-DESTROY ONE HEADER #)
         DSP: IN DSPT. NXTOS;
         IF (DSP1.POI <> NIL) OR (DSP1.EOI <> MIL) THEN
         --- REGIA- (* DATA-SET TO BE DESTROYED IS NON-EMPTY *)
             PEPLSTDIAG( DC1 )
             ENDI
       - (1394) 38(454) ,
         DEP LE CSP1
         END
    END (A EFADUSH #1)
                               -----EBCREATE
VAX*)
FRUCEDURE, EEACHFATE (DAITEFINSUST);
36 36 BOB (81470)
         REROSESTO OPERTES AN INSTANCE (BUT NOT A DYNAMIC RECORD) FORES
         A.E ILE.OR EVILITY*CLASS BY INITIALIZING STATIC DATA VARIABLES*)
( *
         AND BY PETTING FLAGS IN THE DATA-SET OR CLASS DESCRIPTION
( •
         BLOCK TO INDICATE NEW RECORD.
(* [NPUIS$...
         THE HIDDEX INTO THE CATAMSFET/CLASS DESCRIPTION ARRAY, EEVOS.
             . TO THE DATA-SET OR CLASS DESCRIPTION BLOCK WHOSE NEW WY
             INSTANCES IS TO BE CREATED.
4 4
                  SEE70SUST:
    REGIN
    EFRURNATA ( DST );
    TE FERNSTUSIT TSMIND # EFECTASS THEN
         BEGIN (+ FLASS +)
         EE955.IDS[1,DEN := TRUE;
         EF905 (OSI) .CDS t= DSI;
         FOR TO: #EE908 (D811, HOC TO FE908 (D81), EOC DO
             FERINING EEODS (IDL. INTYP );
```

Bource Listing

EFAINCLE OST)

ELSE BEGIN (A FILE OR INTERFACE +)

EE90S [OSI] . INSTT 1# EE6NE 4

ELSE EERTIFAC(DSI);

IF ELOUS [PST] .CLASS = EF1FILCL THEN EEPIRIN(EF908 (DSI) .INTYP)

EFANSIOSII. TNONT := EFANSIDSII. INCNT + 11

E-121

END

END

END (* EERCHE *);

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\$7-Men-1985 17119139

VAX-11 f

DISKSUSE

```
----EEBDESTROY
PROCEDURE LEBNESTROY(DSI:EE7DSLST);
         DC1 =
   "4401 DESTROY EXTITY=CLASS WITH NO ENTITY SELECTED ---
         )(5 =
   14402 DESTROY DATA-SET WITH NO INSTANCE SELECTED
                                                                 ٠,
         ID ... IEE70SLST;
    BEGIN
       FE908[PSI].DSKIND # EE6CLASS THEN
        BEGIN (* CLASS *)
         IF EE90S (DSI) . CDS > FE90S (DSI) . EOC THEN
              PEGIN (* NOTHING SELECTED *)
              IF EEGDS (DSI) HEW THEN
                  BEGIN (* NEW ENTITY WITH NO TYPE *)
                  EE90S(DSI).NEW := FALSE;
         FOR In:= EEQUSINSII, BOC TO EEQDSIDSII, EOC DO
                       EERIPING EE90S(ID). INTYP );
                  EEBINCL( DSI )
                 E110-----
             FLSE BEGIN (* DESTROY WITH NO SELECTED ENTITY *)
                  EFBLSTDIAG( DC1 )
        ELSE PERT
             FERUFSTROY(EE90S(DSI1,CDS)+---
              FOR ID: #EE9DS(DSI).BOC TO EE9DS(DST).EOC DO
                  EE8ININ( EE9DS(ID), INTYP );
         FEBIACL( DSI )
             END
         END
FLSE BEGIN (* FILE, INTERFACE, OR ENTITY=TYPE *)
         IF (EE9DS (OSI) . INSTT . EE6NULL) OR (EE9DS (DSI) . CIN . NIL) THEN
             BEGIN (* DESTROY WITH NO INSTANCE SELECTED #)
             FEBLSTDIAG( DC2 )
             END
         ELSE REGIN
                   (* INSTANCE IS PRESENT *)
      _____IF EE90S (DSI1 . CIN1 . DLTD THEN____
                  BEGIN (* INSTANCE IS ALREADY DELETED *)
                  EEBLSTOIAG( DC2 )
                 END ...
             ELSE BEGIN
                  EF9DS (DSI) .CIN1 .DLTD := TRUE;
   EF905 [CS1] INCNT := EE905 [DS1] INCNT - 1;
                  EE905 (DSI) . INSTT 1= EE6NULL;
                  EEBININ( EE90S[OSI].CIN+.INTYP )
                  END
         Eivi
    END (* EFBDESTRUY *):
(+VAX -----EE8RESDS
                                                                     VAX+)
PROCEDURE EEBRESOS OS : EETOS ST : VAR SV : EETSVTYP):
        DC1 =
   19361 ATTEMPT TO RESTORE ENTITY-TYPE WHICH IS NOT IN ENTITY-CLASS 1;
        002 =
   14362 ATTEMPT TO PESTORE DATA-SET WHICH WAS NOT SAVED
                                    E-122
```

nource-Listing--

143 =

ENF

. Se FFIA

Uξ

HERT

W & Be

END

IF SERVICESTICESKING = EFECTLASS THEN (FOLKS) (F. CLASS P)

EFFLETDIAG(PC1) cher repsevost ch.cos, sv)

C: := E5905:D5I1;

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STO (* FICE, TATERFACE, OF FRITTY-TYPE *) E-123

TEGIN (+ NO ENTITY-TYPE SPLECTED ON A SAVE +)

```
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                                                                              VAX-11 P
                - Source Listing
                                                    17-Mer-1983 17:19:39.
                                                                             DISKSUSE
            IF (DS.CLASS > EETINTCL) AND (EE9DS(DS.CLASS).CDS <> DSI )
                THEY BEGIN (* ENTITY-TYPE NOT SELECTED IN ITS CLASS *)
                 EEBLSTDIAG( DC2 )
                 FND
         -ELSE RECIA
                 IF DS.CIN = NIL THEN
                      BEGIN (* CURRENT INSTANCE NOT VALID #)
                      EEALSTDIAG( DC3)
                      END
                 FLSE SEGIN (* CURRENT INSTANCE PRESENT *)
                      IF DS.CINT.DLTD.THEN ... HEGIN (* CHRRENT INSTANCE NOT VALID *)
                           EEBLSTDIAG( DC3 )
                           END
                      ELSE REGIN (* CURRENT INSTANCE IS GOOD *)
                            SV.CDS := DS.DSTYP;
                           SV.CIN += DS.CIN;
                           EE905(PSI).FELCT := EE9DS(DSI).FELCT + 1:
                           OS.CINT.CNTR := DS.CINT.CNTR + 1
                           END
                      END
                 FND
       .... END.
      END (# EF854VI)5 +);
 VAX#3
 PROCEDURE EEBSETYP( OSI :FE70SLST );
           DC1 =
14441 SET TYPE ON ENTITY+CLASS
                                                                            ٠,
           002 =
     14442 SET TYPE ON FILE OR INTERFACE
                                                                            ٠,
          .. OC3 .=
     14443 SET TYPE WITH NO NEW OR SELECTED ENTITY
                                                                            .
           DC4 =
..... 14444 SET. TYPE WITH AM INVALID INSTANCE SELECTED
 VAP
           CL, nS : EE70STYP;
           CII, ID, DSJ; FE7USLST;
8EG[N
                     :EE7INPTR: _ . . . .
            10
  IF EF90S(DSI).CSKIND = EE6CLASS THEN HEGIN (* SET TYPE ON CLASS *)
           EEBLSTOTAG( DC1 )
           E110
 ELSE BEGIN (* FILE, INTERFACE, OR ENTITY=TYPE *)
            CLI := EE9DS [DST] . CLASS;
            IF CLI <= EEITNTCL THEN
... BEGIN (A SET TYPE ON FILE OR INTERFACE *)
                 FERLSTOLAGE DCS )
                 FNF
    ELSE BEGIN (* ENTITY-TYPE *)
                 CL := FE9DS(CLI);
                 TF ( CL,COS > CL,EOC ) THEN
BEGIN (* NO ENTITY TYPE SELECTED *)
                      IF ( CL.NEW ) THEN
                           PEGIN
                            FE9DS (CLI) . NEW 1# FALSE;
                            EE9DS (CLi).COS := DSI;
```

```
EE905 (DS1) . INSTT : EL ENEW;
                                                                         FOR ID: #CL. BOC TO CL. EOC DO
                                                                                        EESTNINGEE9DS (ID) . INTYP)
                                                          ELSE REGIN (* NOTHING SELECTED ON SET-TYPE*)
                                                                         EEBLSTDIAG( DC3 )
                                                          END
                                            FLSE BEGIN (* AN ENTITY-TYPE IS SELECTED *)
                                                          DSJ := CL.CDS:
                                                                      ## EE9DS (DSJ) #
                                                          IF (DS.INSTT <> EFECULD) OR (DS.CIN = NIL ) THEN
REGIN (* SET TYPE ON INVALID INSTANCE *)
                                                                         FERLSTDIAG( DC4 )
                                                                         END
                                                          ELSE BEGIN
                                                                          IF DS.CINT.DLTD THEN
                                                                                        BEGIN (* SET TYPE ON AN INVALID INSTANCE*)
                                                                                        EEBLSTDIAG( DC4)
                                                                                         END
                                                                         ELSE BEGIN (* SELECTED INSTANCE IS VALID *)
                                                                                         IF DSJ 4> DSI THEN
                                                                                        BFGIN
                                                                                        EESKING OS.CIN DE
                                                                                        EF6XFOC DR.CIR 11
                                                                                        FOR IDERCLARUE TO CLAFOC DO
                                                                                                       FERININ( EE9DS(ID).INTYP );
                                                                                         EE8XII( DS.CIN );
                                                                                        EE8XFT( DR.CIN );
                                                                                        EESNEWIC IP, EEODS [DST] . INTYP );
                                                                                        IPT.OSTYP := DSI;
                                                                                        EF8XIG( IP );
                                                                                        EE8XF0( 19 ):
                                                                                        FOR ID:=CL.BOC TO CL.EOC DO
                                                                                                       FERINING EFONS (10) . INTYP );
                                                                                         EFBYIT! IP 11
                                                                                        LEBAFIC IP DI
                                                                                        EFBDISI( TP ):
                                                                                       DS.CIMT.DETD := TRUE;
EF90S(CLI1.CDS := DSI;
EF90S(DSI1.INCNT := EF90S(DSI).INCNT + 1;
                                                                                        EF 905 (DRJ) . INCNT := EE 905 (DSJ) . INCNT = 1)
                                                                                        EE 908 (DS[] . INSTTI= EE 6NEW:
                                                                                        LEGOS IDAJI, INSTITE EEGNULL
                                                                                       ENU
                                                                                        ENU
                                                                        FNA
                                                          E50
                                           END
                            Ehlu
              FND (* EFBSETYP *):
(1VAL propagations and appropriate the contract of the contrac
PROPERTURE SERVICERT
                           EE91
                                                        IFE75SLST:
             HERIN
              FOR FERI:=FERUS (FELINICL) . RUC TO EFROS (EFLINICL) . ENC DO
                                                                                                                   E-125
```

--- Source (4sting

17-Mar-1983 17:42:51

17-Mer-1983 17119139

AX-11 :

DISKSUSE

```
17-Mar-1983 17842851
                                                        VAX-11 F.
      ----- Source Lieting
                                     17-Mar-1983 17:19:39 DISKSUS!
       BEGIN
   BEGIN
           EE905 (EE91) . INSTT := EE6NULL;
        EE998 (REGI) - INTYP - += EE1NOIN --
           END
       END
 ---- END (* EEBOICHEK *):
VAX#)
PROCEDURE EFSTOI(FEGOSI: EETDSLST);
       DC1 =
   14501 ATTEMPT TO TERMINATE A NON-OUTPUT-INTERFACE
                                                      ' ;
       UC2. =
   14502 A MESSAGE WAS NOT FORMED ON AN OUTPUT-INTERFACE
        08
               :EE7DSTYP;
    BEGIN (* TERMINATE AN OUTPUT INTERFACE *)
    CS:= EFONS (EFONST);
    IF DS. OSKIND <> FE6DATASET THEN
       BEGIN (* ACT AN INTERFACE *) ...
       EEBLSTDIAG(DC1)
       END
   ELSE BEGIN (* A DATA-SET WAS INPUT *)
        IF DS.CLASS <> FETINTCL THEM
REGIN (* NOT AN INTERFACE *)
           EEELSTOIAG(DC1)
           END
        ELSF PEGIN (* AN INTERFACE WAS INPUT *)
           IF. (CS.INSII <> ELENEW) OR (DS.INTYP. = EEINOIN) THEN.....
               BEGIN (* A FORM WAS NOT DONE ON A MESSAGE *)
               EESLSTDIAG(902)
               END
           FLSE REGIN
               EE1TIME := 0.0;
               EEBUPDATE (EE9DST)
       E VIII.
    END (* EFBTOT *):
PROCEDURE EFBUALSAV(EE9FN:EE7DSLST; VAR S1:EE7INPTR; VAR S2:EE7INPTR);
    RECIN
   EEBUPDATE (EEGEN):
    S1 := FEODS (FE9FN) .CIN:
    IF S1 <> NTL THEN
       BEGIN
        SIT. CHTR := SIT. CNTR + 1
        END:
EEBNEWICS2, EE9DS (EE9FN1.INIYP);
    S21 DSTYP := EE9FN:
    EEAXID(S2);
 ENT (* CEBVALSAV *):
VAX+)
PROCEDURE EEBVALRES(EE9FN:EE7DSLST; VAR S1:EE7INPTR; VAR S2:EE7INPTR);
CUNST
       OC1 =
```

```
VAX-11 F
                                            17-Mar-1983 17:42:51
   THE TO BE DESCRIBED THE PROPERTY OF THE CURRENT INSTANCE POINTER
      --- +<del>)(-2-*</del> --
   *4597 CURRENT STATIC DATA POINTER IS NIL
         953 B
   FABRE OAFARSET-TYPE-INCONSISTENT WITH STATIC BATA-ROEWTER OF OUR OF A FAR OFFI
    30311
    Ir 31 45 THEN
         466 fl4 ----
         IF SIT, CNTR > 0 THEN SIT, CNTR :* SIT, CNTR - 1;
         IF SIT. DSTYP <> FEGEN THEN
             HEGIN (+ INPUTS ARE INCONSISTENT +)
             EDBUSTDIAG(DOI)
             2 40
     - - Kirk wends teenem telm tans! - -----
    END

- 15 17 403 (EE 9FN), CIN YE MILY

TO 52 = 10 THEN

HEGIN (& INPUTS ARE NOT CONSISTENT #)
         EE81,3701AG(002)
     ELSE BEGIN
         15 321,381YP CHESEN THEN
            - recin (* inbuts are not consistent *)
             FEPLSYDIAG(D03)
         5.5- GEOIN (* DATA-SET AGREES *)
             EEAXII(S2);
             REPOISI(SZ):
            -- $2 48 NIL----
    .--- -
FUNCTION SEAVEGE (* (DSINEETDBLST): BOOLEAN #);
VAR C.P - FEETDSTYP: SL INCOLEANS
AFG (A
  TA REPUSIOSIDENTAND * FEERLASS THEN
 L 14 EE908108111
   IF (C.CLS > C:2) OF (C.CDS < C.FOC) THEN RESTOR IN TRUE
ELSE LE.C.CLS > C.EOC.THEN.
           IF C. YER THEN FEBVPOCIOFALSE ELSE EESTPOCIATRUS
   ELSE BEGIN
               CA CLASS HAS AN ENTITY-TYPE SELECTED V.
        BL . = EFAVPOC(C_CDS).
         EFBVPCC := BL
   END
 ELSE REGIO (A CHNER 18 & DATA-SET +)
   U := EEPUS (PST):
 ...IF D. ILSTI R FEANULL THEN EERVPOC IS TRUE ...
   ELSF IF D. INSTT = EEGNEW THEN EFBYPOC := FALSE
   ELSE REGIN (* INSTANT SELECTED *)
    IF D.C.IN. = NIL IMEN. EESYROC += TRUE. ... _ ..
     ELSE IF D.CINT.DLTD THEN EFBYPOC := TRUE
          ELSE IF D.CLASS > EFIINTCL THEN
                IF FERRISCO.CLASSI.COS = DSI THEN EESPPOC := FALSE
                ELSE ELPVPOC := TRUE
```

SEGIA.

```
POUNDERFAUSE: IMMOS
-- REPEAT IF FEVINAME = LEVLISTIII, EEVINAM, AASTR THEN
        FOUND 12 TRUES
 - --- EESFIFUIRFUTNAME, EEVLIST (II) LEVINDM, EETIJEE
        E "D
       ELSE SETAT
 CONDUR NO (XXXV3341) LITTUUL
    IF NOT FOUND THEN
        REGIA
        WRITEL WOULD IT TO ATTEMPTED CAUSE OF AN UNKNOWN EVENT, ! .
        | EVENT IGNORED, TIME = ", RECLUCK):
-MITELNOW TRUTH! FVENT NAME IS ", FEVT AME)
$ 403
 VAXAN
  CLUCEDURE EFACT MESCHNIEFITHLSTI IMIPEALII.
 45675 EF1#19E1#739
    LICAURL (EFATATYANIMA) . AASTR, III);
    50 75831958
                                                                                                                                                   VAX#1
PROFE : EFFSY "EG (INTAVERTOSEST) VAR FORBOOLFAN);
BEGIN - EFFST (INTA): FOR#EFHFUURD (INTA) END (* EEFSTMES *);
                                                                                                                                                   VAX#>
 PROCEDUPE EFNYTHER (TATALEFTOSUST) OF HUDUFAN; VAR FOLBOOLEAN) :
 ##SIN IF OF THE PERUFSTROY(ININ);

SA SXT(ININ); FOR#EFBFCUNG(ININ) END (* FENXTMES
 VAX#)
PAGCEDURE EFRITOEC (OSD:FE70SLST);
 SEGIN FERCELOTECTS! ENG IN FEBLUARE
 (1.14 DAKEBERGTERA GRADERUNGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGERBRURGER
                                                                                                                                                   VA>#1
 22072 DAR ECSAVEER (PSM: FE70SUST);
 SERVAL TERUPURTE (ISM) - END (* FESAVREC
 VAX±)
 99056707E SEOST 150(PSN:15870$UST);
 REGIN FEBUESTHOY (DSA) END (* FEDSTARG
 VAX+)
 PROCEDURE EFFSTREC (DSMIFETOSLET) VAR FOIBOOLEAN);
 HEGT - FEHETRETIOSAT: FOI#FFREOUNDIDSNT END (* FEFSTREC
                                                                                                                                                   VAX+)
 PROCEDURE EFNYTHEC (CSNIFERDSLST) VAR FD:HOULEAN);
 AFGIN FEANEXT(DSP): FD:=EERF(HIND(DSP) FND (* EENYTREC
 ( zame = manual to up PISF COUP BLOCKsessessesses
 (* SETS PROPERTURES THE MEANERS
                                                            SOF
  TIMERURE SOEYES IN EXPRESSES STIMULT *)
    PHECIA
        (* TO EXUMENDES STIMBLE ARE USED THE THIS SIMULATION #)
```

```
17-Mer-1983 17:42:51
                                                                           VAX-11 P
                                                 -17-Mer-1983 17+19+39 - DISKSUSE
         --- Source Listing -
 END (* SSFXOG *);
PROCEDURE SSSTARTUP (* STARTUP OF SIMULATION *)
  (* POST THE FIRST MESSAGE TO THE SURSYSTEM AT #)
  (* THE DESIRED SIMULATION START TIME *)
 BEGIN
    OPEN(MSGS, ! MELSMSGS. DAT', OLD)
    IRESET (MSGS)
  . ; OPEN(STAT, 'NELSSTAT, DAT', OLD)
    FRESET(STAT)
    * PEAD (MSGS, SS+MSG+SOURCE
             +SS+MSG+NAME
              ,SS+MSG+DEST)
      ID400544SET4MSG48QURCE4DATA: #884MSG48QURCE
      : F+004+4SFT+ 15G+NAME+DATA:=SS+MSG+NAME
      17+002+4SFT+MSG+DEST+DATA:#SS+MSG+DEST
    JEEPLDHEC (F+16+NELS+EMITTER+FILE)
    ; PEADLN (MRGR, D+063+4+NELS+EMISSION+START+TIME+DATA, Re
         De064+A+NELS+EMISSION+STOP+TIME+DATA,
         D+082+A+NELS+EMITTER+VFL+X+DATA,
         D+083+4+MELS+EMITTER+VEL+Y+DATA,
         D+084+A+NELS+EMITTER+VEL+Z+DATA,
         N+073+A+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA.
         C+075+A+MELS+EMITTER+ID+DATA,
         De085+A+NELS+EMITTER+X+DATA,
         D+OBK+A+"ELS+EMITTER+Y+DATA,
         De087+A+*ELS+EMITTFR+Z+DATA,
         De0d1+A+MELS+EAITTER+TRANSMISSION+FREQUENCY+DATA,
         D+130+4+5CENARIO+GEN+ID+NUM+DATA)
    ; EESAVREC (F+16+NELS+EMITTER+FTLE)
    : OPEN (POST, 'POSTBET, DAT', OLD)
    #PESET(PUST)
    FREADLN(POST, SSPESTINGTIME)
    ;EEPSTMES(MediteSenelSeuniteAmbelnvironmenteDataemSGein,SSPOSTINGTIME)
  END (* SSSTARTUP *);
PROCETURE SSELERESTEDFEASE (* DUMMY MODEL OF ASET SYSTEM *)
  138614
    (* SINCE THIS SIMULATION MODEL POSTS MESSAGES FROM A PRESET #)
    (* FILE, IT DOES NOT NEFD TO EXAMINE CONTENTS OF OUTPUT MSGS #)
    (* WHILE HEADERS AND FORM MESSAGES UNTIL END OF MSGS FILE #)
    WHILE NOT EOF (MSGS) OO BEGIN
    #PEAD(MSGS, SS+MSG+SOURCE
              , SS+45G+NAME
              . 95+MSG+UEST)
    ; PEADLN (POST, SSPOSITNGTIME)
        IN+005+45FI+MSG+SOURCE+PATAIRSS+MSG+SOURCE
        10+004+ASET+MSG+NAME+DATA1=SS+MSG+NAME
        IP+002+4SF F+MSG+DEST+DATAIESS+MSG+DEST
```

```
FASE TO THE ABOVE ABOVE THE OF
      MINGGONELS+CARTD+UPDATESIBEGIN
          EEBLDREC(F+02+CARTO+UPDATE+FILE)
           PREACT MEMSGS, D+029+CARTO+SECTION+NUM+DATA,
                           S+939+CART9+UPD4T5+1+94T4;
                           D+031+CARTO+UPDATF+2+DATA,
                           JEJ32+CARTO+UPOATE+3+DAYA,
                           9+033+CARTO+UPDATE+ (+9ATA,
                           D+034+CARTO+UPDATE+Y+DATA)
          JEESALRES(F+02+CARTO+UPDATE+FILE)
          FEERSTAFS (M+02+NELS+CARTO+UPDATES+MSG+IN, SSPOSTINGTIME)
      END
      1 MH 03 MMELS+COMMANDERS+REQUIRFMENTS 1 BEGIN
          EFACOREC (SHOREGROASHOATAHTOHUPDATEHFILE)
          FREADL N(45GS, 0+040+FIRST+CMORS+REQ+UPDATE+DATA,
                           D+133+SECOND+CMDRS+REO~UPDATE+DATA;
          ILESAVRES(F+64+540R3+0AT4+TO+UPOATE+FILE)
           ÷FEPSTMESCM+03+MEES+COMMANDFRS+PEQUIREMENTS+MBR+IN;89POBPRNGFIMER
      END
      I IN+OU+NELS+MOGIFTED+TASK I BEGIN
          READLM398, D+056+NEEDED+FEASTALE+DATA:
                     7+139+7495+902+10+04747
           inialamec (fassafeastaleaactivityaareaafile)
           ; YEAULN(MSGS, O+143+X+LOC+FEASIBLE+DATA,
                           0+145+Y+L0C+TEATITUE+DATA)
           FILESKUNERERASEMEEASTRUCHACTTVELYMAHEAMFILE)
           THEPSIMES (M+044NELS+MODIFIED+TASK+MSG+IN, SSPOSTINGTIME)
      E VO
       : "NADA & NELS + ORBIT + MODIFICATIONS : BEGIN
          HEAD! MSGS, 0+135+SENSOP+ID+DATA)
           ELECTIONS CONTRACTOR OF A CONTRACTOR CONTRAC
          43E D. CASSOLDWILLTARELATEURNAMONINGATAL
                           D+118+PLATEORM+MUD+Y+OATA,
                           D+119+PLATFORM+MUD+Z+DATA)
         #FESAVERGIF#32#SENSOR#URBIT#MODS#FILE?
           ; FEPSTMES (M+06+NELS+ORBIT+MODIFICATIONS+MSG+IN, SSPOSTINGTIME)
      END
       AMVHOREMEL SERRIDECTLIEDESCNSOREMIRECTIONS & REGIN
          READIMSGG. 04056+NEEDED4FEASIBLE4DATA,
                     DAY 354SEMBORATOADATA,
                     "#137#SEMSOR#PRIGRITY#OAT#1
           $EEPLORFGIFFOSFFEASIBLEFACTIVETYFAREAFFILES
           THE OUT OF SUB- DATABOXA LOCA FEASTBLEADATA.
                           D+1454YALOCHEEASIBLE+DATA) -
           IFESAVREC(F+05+FEASIBLE+ACTIVITY+AREA+FILE)
           FEEDSTMEN (M+OR+NELS+PRIDRYTTZFD+SENSOP+DIRECTIONS+MSG+TM)
                               SSPOSTIMETIME)
      ANKHORES BEREGIERTEURBENEOPENATA IN BEGIN
          READ (PSGS, D+GHS+GPS+ID+DATA)
           IFERLAREC (F+07+GROUP+TARGET+LOCS+FILE)
           ; PEADLN(MSGS, D+O48+GROUND+T4RRET+LOC+X+DAT#,
                           DAGERAGROUNDATARLETAL CONTADATA)
           IFERAVREC(F+07+GPDUP+TARGET+LOCS+FILE)
          FFEDSIMESIA4094MELS4REWLESTED4SENSUR4DATA4MSG4IM,3SPOSTINGTIME)
      £ (14)
       1 THE 15 - THE WEST PROPERTY REGIN
```

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17-Mar-1983 17:42:51
                                                                     VAX-11 P
             -- Source Listina ----
                                             17-Mer-1983 17419439
                                                                     DISKSUSE
          EFPSTMES(M+15+T+AND+C+STOP+NELS+MSG+IN, SSPOSTINGTIME)
      END; (* CASE *)
    END
    smalleton, 1)
    JCLOSE (MSRS)
    (CLOSE (STAT)
 END (* SS+1+REST+CF+ASE *);
 (* SIMULATION INITIALIZATION PROCEDURES RISF *)
 (±VAX anamen-reservances and servances and servances are servances EEINITIAL
PROCEDURE EFINITIAL:
VAR
  I: INTEGER:
  CHI CHARI
  EEZZID, EEZZTIME, EEZZDATE: AASTRING;
  EEUFNILL, EFDFVAL: ROOLEAN,
BEGIN
UPEN(REDF, 'FEDF. DAT', OLD);
OPEN(EESUIF, 'EESUIF, DAT', OLD);
WPITELN(' SIMULATION OUTPUT ');
 WRITELN:
FOR I = 1 TO EFMAXDEP DO
EEDEPLST[]: =FALSE;
  RESET(EEDF);
  EEDFNULL := EDF(EEDF):
  WHILE NOT ENFIEFDE) DO
  SEGIN
IF EEDFT. EERT # EEVNTREC THEN BEGIN
 I:=EEDF+.FEVTHUM;
EEVLIST! Il := EFDFt;
END
ELSE
  IF EEPFT.EERT = EELISTRFC THEN BEGIN
    IF FEDET FENAMECODE & FELSIMID THEN
      EEZZID := EEDF+.EENAMESTR
    ELSE
     IF FEDET FENAMECODE = EELSIMDATE THEN
      EFZZDATE IS EFDET. EENAMESTR
    IF EEDET FENAMECODE . EELSIMTIME THEN
      EEZZTIME := EEDFT.EENAMESTR
    END:
GETTEEDE
  ENO:
  EELEVT: #NTL; EEFF. VT: #NIL; EECEVT: #0;
 EFTERM IN FALSE!
  EE83ETUF;
  EECLOCK := FESSINTTTIME;
CLOCK+IIME := EESSINITTIME:
  EEDEFSTART := FALSE;
  EEDEFEND IN FALSE!
  RESTIGESUIF):
  EESUIFERR := EOF(FESUIF);
   WHILE NOT(ENF(EESLIF)) DO
    BEGIN READ(EESUIF, EERECTYPE);
      IF (EFRECTYPE=1) THEN
                                     E-132
```

```
BEGIO READLA (EESUTE, ERSTAPTTIME); EFDEFSTART : #TRUE END
 IF (EERFCTYPE=2) THEN
      GESTA READLA (BESUIF, EFSTOPTIME); FEDEFEND: #TRUE END
     IF (EERFCTYPE # 3) THEN
      BESIN
EENHATO AALEN 12 01
      FOR I := 1 TO AASTRLEN DO EERUNIO.AASTRII] := ! !;
       READ (FESUTF, CH);
   I := 1;
       EFRUNTO. 4ASTR[1] := CH;
 BEGIN
        READ (EESUIF, CH);
  EFRUNTO.AASTRII := CH
  EERUNID. AALEN := I
       見べむ
    ساست دغ دارخ ع
      GENYA READLY (EESUTE); RETELNET INDUS IGNORED, RECORD TYPE . ..
        EFRECTYPE
   6000
EEDFVAL := (EFZZID.AASTR = EESIMID.AASTR) AND
 TEEZZID.ALLEN = EFSIMID.AALEN);
FORVAL := EEDRVAL AND (EEZZITME. AASTR = EEGTIME. AASTR) AND
 (EEZZTITE. # &LEV = EFGTIME. #ALEN) ;
OF SPYAL 4 = ECOLOUS AND (LEZZOATE AASTR = EEGDATE AASTR) AND
 (EEZZDAYE. = ALEN = EEGCATE. AALEN);
PITELLS SIMULATOR CREATED ON SEEGDATE.AASTRIEEGDATE.AALEN, AT 1.
 ERGILME, AZSTRIEFGTIME, AZLEN, LEITH TO I, EFSIMID, AASTRIEESIMID, AALEN);
IF EEPENBLL THEY ANTTELNI' NO EEDE FILE PROVIDED !)
Section Extre of Media begin
 HASTELMS FARDE FILE DOES NOT MATCH THE SIMULATION PROGRAM TEXY 111
 PRESENT OF EACH CREATED ON TREEZODATE AASTREEZZDATE AALEN, LATT.
   . E 22 TIME . * ASTR * FEXITIME . AALEM . I. WITH ID ! .
   EFEZZIO.AACTR:EEZZIO.AALEN);
 IF LOOK ELDEFSTARE THEM.
      HEGIN HOLTELNO' START TIME NOT INPUT '); EESUIFERRIMTRUE END;
 IF OUT BENEFETO THEY
      REGIN ARTIELA(1 EAD TIME NOT INPUT 1) + EESUTERREMIRUE END:
 IF (EFSTIFERR) OH (FENEMULL) OR (NOT EEREVAL) THEN
   ⇒€ (+ ) ".
     RPITELUC! SIMULATION PROGRAM CAN NOT BE EXECUTED 134
     GNTN 9904
   E 5 0
 ELSE BEGI
RELETELNE
PRITELY (1 HOW ICE TREFHINDS, AASTRIEFRUNDD, AALEN, OR PATER TREEY DATE, MASTRIEEK DATE, AALEN,
 T. TIME: ", FEYTTME . BASTR: FEXTIME . BALEM) ;
```

```
17-Mar-1983 17:42:51
                                                                     VAX-11 P
                                              17-Mer-1983 17:19:39
                                                                     DISKSUSE
                Scurce Listino
 WRITELN( ! SIMULATION START TIME = ', EESTARTTIME);
 WRITELN(! SIMULATION FAR TIME = !+EFSTOPTIMF);
 WRITELN:
 REWRITE (EEVALDAT):
 -MRITELN(EEVALDAT, ! VALIDATION DATA FOR PUNE !,
   EERUNTO.AASTRIEFRUNID.AALEN,', DATE: ', EEYDATE.AASTRIEEXDATE.AALEN,
   * TIME: ". :FATIME.AASTR:EFXTIME.AALEN);
... WRITELN (ELVALDAT) #..
 EECAUSE ('SSSTARTUP
 EECLOCK);
 EECAUSE( FEDERUG_ ___
 EECLOCKY;
 EECAUSE ( 'EESTOP
 EESTOPTIME):
   END
 END:
 CHARREST OF RISE CODE BLOCK-----
                                        PDSF ±)
 (* ALPHE PROCEDURES
  PROCEDURE 4+01+01'E+1 45+NOISE+GENERATION+ALPHA;
     ...... REGIN.....
      De018+ASP+PITCH+DATA := De018+ASP+PITCH+DATA + 0.01
   - ID+019+ASP+ROLL+DATA IE D+019+ASP+ROLL+DATA = 0.01
      10+025+ASP+YAW+04TA := 0+025+ASP+YAW+DATA + 0.01
      JD+010+ASP+ALTITUDE+DATA := D+010+ASP+ALTITUDE+DATA = 0.01
      ID-012+ASP+LATIT:DE+DATA.:x.D+012+ASP+LATITUDE+DATA..+.0.01..............
      JD+017+ASP+LONGITUPE+DAT4 := D+017+ASP+LONGITUPE+DATA = 0.01
      JD+014+ASP+LCC+X+DATA := D+014+ASP+LOC+X+DATA + 0.01
 .....:De015*ASP*LCC+Y*DATA := De015*ASP*LCC*Y*DATA == 0.01.....
      ID+016+ASP+LCC+Z+CATA I= D+016+ASP+LCC+Z+DATA + 0.01
      ID+021+ASP+TIME+DATA I= D+021+ASP+TIME+DATA - 0.01
  10.0 + ATAC+X+J3V+C2+ASP+VEL+X+DATA + 0.01
      1D+023+ASP+VEL+Y+DATA IR D+023+ASP+VEL+Y+DATA - 0.01
      10+024+ASP+VEL+Z+DATA := D+U24+ASP+VEL+Z+DATA + 0.01
 END:
 PROCEDURE A+02+GENERATE+DME+ALPHA;
     D+021+ASP+TIME+DATA 1= D+141+TIME+DATA
 BEGIN
 EEBUPDATE(F+06+FLIGHT+PPOFILE+FILE);
EEBFIRST(F+36+FLIGHT+PROFILE+FILE);
 RECORPAROUND := EEBFDUND (
F+06+FLIGHI+PROFILE+FILE)
 END
 ;D+014+ASP+LOC+X+PATA := D+041+FLIGHT+MAYPDINT+X+PATA
#D+016+ASP+LOC+Z+DATA ## D+043+FLIGHT+WAYPOINT+Z+DATA
      :D+022+ARP+VFL+X+DATA := 0.0
      10+023+ASP+VFL+Y+DATA := 0.0
      ID+024+ASP+VEL+Z+DATA IE 0.0
```

```
ENDI
  PROCESURE AND SHEEPERATENTINSHALPHAY
    DEDIRENSHEDITCHEDATA 28 0.0
    JD+U25+4SP+1cH+DATA IR 0.0
      #D+010+ASP+ALTITUDE+DATA ## D+014+ASP+LOC+X+DATA
      : De012eASPaLATITUDE+DATA SE De015eASPALOCAYEDATA
      ENC:
  PROCEDURE 1-04-14 [TI4L*ZF+06LS+ALPHA;
            ....ALGIN
EEBCREATE(EC+; +NELS+DETECTABLE+EMISSIOM+PPE4KOUT+EC);
 EEBCREATE (EC+24MELS+SCENARIO+EC);
--- EEECKEATE (ECH3+NEL SACASKSAEC) +
 RESORESTE TETET 44 MEL SATHREATAGET ;
  EESCREATETETOR + NELS+ VEHTCLEOCHARACTERTS (105+10);
 - EEOCHLATE(ECAA+DETECTED+EMISSIONS+INFO+EC)+
-- BEGIN --
  EFHUPPATE (F+16+NELS+EMITTER+FILE);
  EFAFIRST(F+,5+artS+EMITTEP+FILE);
 F+15+MELS+EMITT-H+F(LE):
  WHILE RECORD-FOUND DO
- SECIN -
   EFASAVDS (FATS - NEL SAEMTTTER & FILE.
  F754V01);
  CEBCREATE (F+) 4+ MELS+EMITTER+ACTIVITY+GROUND+TRUTH+FILE)
          10+3A3+8+NELS+EMISSION+START+TIME+DATA IP
              : +C63+4+NELS+EMISSION+START+TIME+CATA
          ... Denbuenelseemissionesioretimeedata.....
             n+064+44-MELS+EMISSION+STOP+TIME+DATA:
          DEOPERATES EMITTER - VEL - X + OATA : 18
              * Oceanaut LSAEMITTERAVELAXOUTTLE
           UADESA VELSAEMITTERAVELAYADATA :-
             THREE SHEMITTER - VEL - Y-DATAS
      UNURHANEL SAEMITTERAVELAZADATA 12
             D+080+A+NELS+EMITTER+VEL+Z+DATA;
            Dec73+P+hELS+EMITTER+FREQUENCY+BANCWIDTH+DATA 18
            ...n+073+A+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA:
            DAMPERANELSAEMITTERAIDAMATA 18
             METTERALELSAEMITTERAIDADATAS
            Detempetelseemitterexedata is
              OFE WARNEL SEEN TITTERAXEDATAS
```

F = 135

---- ---- 500+00 -L.f.914+----

17-mar-1983 17:42:51

- 17-Ker-1983-17119138

VAX=11 i

-DIBKBUGE

```
17-Mar-1953 17:42:51
                                                                                                                                                              VAX-11 F
                                                                                                           17-Mer-1983 17419439
                                                                                                                                                             DISKSUSE
                                       Source Listing -
                            D+086+P+NELS+EMITTER+Y+DATA 1=
                               -D+O86+4+NELS+EMITTER+Y+DATA-; --
                            C+087+R+NELS+EMITTER+Z+DATA :=
                                D+087+A+NELS+EMITTER+Z+DATA ;
                           Den81eRevELSeEMITTEReTRANSMISSIONEFREQUENCYEDATA :=
                                D+061+4+MELS+EMITTER+TRANSMISSION+FREQUENCY+DATA ;
                            D+130+8+SCENARIO+GEN+ID+NUM+DATA :=
                             D+13C+A+SCENAPIO+GEN+ID+NUM+DATA .....
                   END ;
     EEBUPDATE (F+16+NEL S+EMITTER+FILE);
    EE7SAVC1);
     EEBNEXT(F+16+MELS+EMITTER+FILE);
    RECORDAFOUND 1= EF8FOUND ( --
    F+16+NELS+EMITTER+FILE)
    END
     END
  EEBCREATE(F+04+FLIGHT+PROFILE+FILE) -
                        :D+0#1+FLIGHT+WAYPCINT+X+DATA := 0.0
                      10+003+FLIGHT+WAYPOINT+Z+DATA := 0.0
  EEBCREATE (F+27+PLATEORM+CONTROL+FILE)
                        :D+010+ASP+ALTITUDE+DATA := 0.0
                       :De014+ASP+LOC+X+UATA := 0.0
                        ;0+015+45P+LOC+Y+04T4 := 0.0
                        ; 0+016+ASP+LOC+Z+DATA := 0.0
                        +D+022+ASP+VEL+X+DATA := 0.0
                       ;0+023+45P+VEL+Y+DATA := 0.0
                        10+024+ASP+VEL+Z+DATA := 0.0
    EFBCREATE (F+19+NELS+FRE DUENCY+SCAN+FILE)
                       10+092+NELS+FREQ+SCAN+LOKER+FREU+DATA 1= 0.0
                       ;D+093+NFLS+FREQ+SCAN+UPPER+FREG+DATA := 0.0
EEBCREATE(F+20+NELS+PRE+BRIEFED+A01+FILE)
                       $U+005+VFLS+PRE+RRIEFER+AUT+FILTERING+CRITERIA+DATA 1=
                        MITHIMAREA
                       10+097+NFLS+PRE+RRIEFED+401+LOWER+LEFT+X+DATA 1# 0.0
                        ##+098+NELS+PRE+RRIEFED+ADI+LOWER+LEFT+Y+DATA #= 0.0
                       :D+100+NELS+PRE+BPIEFED+A01+UPPEP+RIGHT+X+DATA := 0.0
                        THE TOTAL SEPTEMBER TO THE PERSON OF THE PERSON OF THE PROPERTY OF THE PROPERT
    EEBCREATE(F+21+NELS+PRE+BRIEFED+SOI+FILE)
                        :D+103+NFLS+PRE+RRIEFED+SDI+END+FREQ+DAT* 1= 0.0
                        :0+104+NELS+PRE+PRIEFED+SUI+FREG+DATA 1E.0.0
                        #U+155+NELS+ORE+GRIEFED+SCI+MODULATION+TYPE+DATA ## MODULATED
                        #30-106+ OF LSOPRESARTEREDOSOTOSTANTORNEGODATA . ## 0.0
    EEBCREATE(F+15+"ELS+E"ITTFR+CHAMACTERTSTICS+FILE)
```

```
17-Man-1983 17142151
                                                                                                                                                            VAX-11
               Saurce Lister
                                                                                                     -- 17-Mar-1983 17:19:37 -- DIBKSUEE
                      - 10+067+NFLS+EMITIER+EANDHIOTH+DATA 1# 0:0
                        JUHO77+A+NFLS+EMITTER+MUDULATION+TYPE+DATA := MODULATED
                        300778+A+NELS+EMTTTEPOPORER4LEVELODATA (# 0.)
     LESCHEATESFHERHNELS+HEATHFR+CONDITIONS+FILE)
            :0-146+Y+WEATHER+LOC+DATA := 0.0
                        1343394ELEVATION - WEATHER + DATA 12 0.0
          TOFORTHOLOCOFCOVERFOATA := CLEAR
     ENDY
       -- ADOLO PPE ANDSHNELSHAREAHOFFINTERESTAFFLTERHALPHA:
     136719
     37611
    REGIONAL EMPLICACION DE LE ENGREPPARTIC
PROGRAMME SACIALANTAREAT (ARETSAFT), ED
THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O
         SEASAVUR(#+!J+VFLS+CANDIDATE+TARGETS+FILE.
  __EF1S44011;
       े इंदि र्भ
                     towners (FLS-Exist) TWODURATIONSPACE 1=
       _____ ALACATECA PROJUCE SAFATA ....
                      : 1+3624NEES+EMISSION+SIGNAL+STRENGTH+DATA :=
                         0-0-2-48LS+8415810N+SIGNAL+STRENGTH+DATA
     CHOASENEL CHEY ISSIONESTARTETIMEEDATA

17- FREE : SEE : ITTEREFREQUENCY #3450 ATOTHEDATA | ##
            _____LEUIZENCLESERMLITEREFRE DUE VCYARANDHIDIHADATA _ _ ___
                      : 14 17 TH MOUSHEMITTER HIDENATA : # DE075 ENELSEEMITTER # 10 + DATA
                        10-125+ VELROFNITTERSYMPATA :=
                             DADESANEL SAEMITTERAXADATAS.....
                          OF JANK CELSOS YTTTERFYFDATA (##
                              $ 4400444524145045 25, 40 EL 4C
                 - DADETA IFLESHENTITERWZ+DATA ;
                       THE THE USER WITT THE TRANSMISSION FREQUENCY FRATA :=
                          .DADRIENELS-SETTIER+TRANSMISSION+EREQUENCY+DATA
                       1 THIS THREEF LAN TO-BEN-ID-NUMBER IS
                          9+153+30614913+9674410+4UX+UAT4
      EFAMPRATE (F+10+MELS+CANDIDATE+TARGETS+FILE);
      EFERESCR(F+19+NFLS+CANDIDATE+TARGETS+FILE,
      ELISAVUI):
      FURNEXTORAL TANEL SACTION TO LIEATAPRETSAFTLES :
      ##COMPO#EG 150 1# E1 3FGUAD(
--*10#5F1 3+C 50DID 51E4T146E75#F(UF)
                                                                                              E-137
```

	17-Mar=1983 17-Mar=1983		VAX-11 P
END			
}			
BEGIN			
EEBUPDATE(F+20+VELS+PRE+BRIEFED+ADI+FILE)+			
EEBFIRST(F+20+NELS+FRE+BRIEFED+A0I+FILE);			
RECORD+FOUND := EE8FOUND(
F+20+NELS+PRE+BRIFFED+A0I+FILE);			
WHILE RECORD FOUND DO			
BEGIN			
EEBSAVOS (F+20+NFLS+DRE+RRIEFED+A01+FILE+			
EE7SAV01);			
DREAL 12 Decements PRE-BRIFFED-AGISLO	ERALEFTAXADA	TA	
1			
EEBUPDATE(F+20+NELS+PRE+BRIEFFD+ACI+FTLE);			
EEBRESDS(F+20+NELS+PRE+BRIEFED+ADI+FILE+		· · · · - · - · - ·	
EE7SAVG1);			
EEBNEXT(F+20+NELS+PRE+BRIEFED+ADI+FILE);			
RECORD-FOUNC := EESFOUND(·	
F+20+NELS+PRE+BRIEFED+A0I+FILE)			
END			
END			
FOREAL FE D+014+ASP+LCC+X+DATA			
; DREAL := D+01C+ASP+ALTITUDE+DATA			
:DREAL :* D+018+ASP+PITCH+UATA			
ENDI			
PROCEDURE A+06+NELS+COARSE+LOCATION+ALPHA;			
VAR DREAL 1 REAL			
ISFGIN			
BEGIN			
EEBUPDATE (F+1A+NELS+ESTIMATED+GROUND+TRUTH+FILE			
EE8FIRST(F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE)			
RECORD + FOUND + = FEAFOUND(
F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE)			
END			
1			
BEGIN			
EEBUPDATE (F+17+NELS+ESTIMATED+EMITTER+PARAMETER	S+FILE):		
FFAFIRST (F+17+NELS+ESTIMATED+EMITTER+PARAMETERS			
RECORD+FOUND := EE8FOUND(
F417+NELS+ESTIMATEO+EMITTER+PARAMETERS+FILE):			
WHILE RECORD + FOUND CO			
BEGIN			
EEBSAVDS (F+17+NELS+ESTIMATED+EMTTTER+PAPAMETE	PS+FILE.		
EE78AV01);			
			
E-138			

- Source Listing

4EG1N	
EEBCREATE 'F+1R+MEL S+ESTIMATEO+GROUND+TRUTH+FILE)	
- 4501674664848485ION4OHRATION4DATA-4#	
11 157 PELSHEMISSION-DURATION-DATA	
:Deige AFT	
C+068+NELS+EMITTER+CEP+DATA := 0.5	•
10+160+NELS+EMITTER+ID+DATA 1= D+160+NELS+EMITTER+ID+DATA;	
141624NEUS4E * ITTER+X+DATA +=	_
n+167+NELS+EMITTER+X+DATA;	
AP. 63+NELS+E-SITTER+Y+DATA 1#	
L+104+MELS+EMITTER+Z+VATA 1#	
L+164+NEL9+EMITTER+Z+DATA;	
- Caleraschartoagenaldarundata, f#	
DeipSesciarioegeneiderumenata	
10PEAL := SenbaekElseDDete2eDATA	
,úREal	
FUPEAL IT C+010+ASP+ALTITUDE+DATA	
TUFERF IE CHOIMHASPHLOCHXHDATA	
and the same of the same of the same and the	
UNEBUIFDATEE-HELFHREESTIMATEDHEMITTERHPARAMETERBHRILETE	
. 357%500 FV17+HFLS+FSTIAATEO+EY(TTEP+PARAMEYERS+FTLE,	
٠٠٠ - ١٠٠ - ١٠٠ - ١٠٠ - ١٠٠ - ١٠٠٠ - ١٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١٠٠٠ - ١	
EFBNEXT(F+,T+NEUS+EST!MATED+EMITTER+PARAMETERS+FILE):	
RECORPARCY := EFREQUAD(
Fallmie_S. C.T. i. A. E. Dagmil Teraparametersafile)	
E^0	
- X	
,	
ÉNO:	
PRICED RE GENTERELECTATIONER PHAY	
VAR DALAL : REAL	
TARLIA	
JEGIA	
EFBUPDATE (F+1744ELS+ESTIMATED+EMITTER+PARAMETERS+FILE);	
CONTINUE OF CONTIN	
RECORDEF, JND. 12 EL BEQUND (-
F+17+ SELS+ESTIMATED+EMITTER+PARAMETERS+FILE);	
AHILE MECONOMERAGINAD DO	
&EBSAVOS(F#17#NELS#ESTIMATED#EMITTER#PARAMATAD##1115	
EE784V0131	
AEGIN	٠
EE8CREATE (F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE)	
: 0+150+MELS+EMITTER+FREQUENCY+BANDWIDTH+DATA:#	
D41594 VELS4EMITTER4FREWDENCY4BANDWIDTH4DATA:	
UP377+ VELSHENITTER+MODULATION+TYPE+DATA :	
CAN LLA ADERA DA TILI DA ADOMONIA L'ANNA LA LA DANCA LA LES	

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17-Mar-1983 17:42:51
                                                                        VAX-11 F
                                                17-Mer-1983 17:19:39 DISKSUSE
             D+077+NELS+EMITTER+MODULATION+TYPE+DATA ;
            D-078-NEL SAEMITTERAPOWERALEVEL-DATA 18
             D+078+NELS+EMITTER+POWER+LEVEL+DATA 1
            D+161+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA :=
             Delfierelseemitteretranshissionefrequencyedata
  EEBUPPATE (F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE);
  EEBPESOS(F+17+NFLS+ESTIMATED+EMITTER+PARAMETERS+FILE,
  EE7SAV01);
  EEBNEXT(F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE);
  RECORDARDIND 12 EEBFOUND (-
  F+17+"EL3+ESTTMATED+EMITTER+PARAMETERS+FILE)
  END
  END
           ;DREAL := D+018+ASP+PITCH+DATA
           ;DREAL := D+010+ASP+ALTITUDE+DATA
          IDREAL := C+014+4SP+LOC+X+DATA
BEGIN
  EEBUPDATE (F+13+MELS+EMISSION+THREAT+TABLE+FILE);
  EE8FI9ST(F+13+NFLS+EMISSION+THREAT+TARLE+FILE);
  RECORD+FOUND := EE8FOUND(
  F+13+NELS+EMISSION+THPEAT+TABLE+FILE);
  WHILE RECORD + FOUND DO
  BEGIN
    EEBSAVOS(F++3+ VELS+FMISSION+THREAT+TARLE+FILE,
  EE7SAV01);
             DRFAL := D+067+NELS+EMITTER+BANDWIDTH+DATA :
  EEBUPDATE(F+13+NELS+EMISSION+THREAT+TABLE+FILE);
  EEBPESDS(F+13+NELS+EMISSION+THREAT+TAGLE+FILE,
  EE7SAVO1);
  EEBMEXT(F+13+MELS+EMISSION+THREAT+TABLE+FILF);
  RECORD+FOUND .= EESFOUND(
  F+13+NELS+EMISSION+THREAT+TABLE+FILF)
  END
EKU....
BEGIN
  EEBUPDATE(F+1A+MELS+ESTIMATED+GROUND+TRUTH+FILE);
  EE8FIFST(Fe18+NELS+ESTIMATED+GROUND+TRUTH+FTLF);
  RECORD + FOUND := EEBFOUND(
  F+1A+"ELS+ESTIMATED+GROUND+THUTH+FILE);
  WHILE RECORD + FOUND TO
BEGIN
    EE8SAVDS(F+18+NELS+ESTIMATED+GROUND+TPUTH+FILE,
  EE7SAV01);
           PEGIN.
  EEBCREATE (F+1P+"EI S+ESTIMATED+GPOUND+TRUTH+FILE)
```

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17-Mer=1983 17442151
57-Mer=1983 17619139
                                                                      VAX-11 F
                 Source Linting
                                                                      DISKEUSE
             : 1+157+ ELS+EMISSION+DURATION+DATA :=
              ;U+153+NELS+EMTSSICH+STAR(+TIME+DATA ##
                D-158+WELS+EMISSION+START+TIME-DATA
        THOSE HUELS + EMITTER + CEPHOATA
              10+070+NELS+FMITTER+COV+DATA 1= 0.5
         D+160+MELS+EMITTER+ID+DATA
           #5+162+NELS+EMITTER+X+DATA IR
           ---- C41624/ELS+EMITTER+X+UATAF
            THIS TO THE ELSHEMITTER THE DATA IS
              D+163+NELS+EMITTER+Y+DATA :
           - detendence See ATTTENEZ+Data 1=
              D+164+NELS+EMITTER+Z+DATA +
              DAJASASCENARIDAGENAIDANUMADATA SE
                heibhescenakioegeneinenumenata
          END ;
 LEBURMATR (F+1A+MELS+ESTTMATED+GROUND+TRUTH+FILE);
--- ZEBRESDRIFA COLDENSTIMATED + GROUND + TRUTH + FILE,
  "E75aV011;
 FFENERTIFFIANNELS+ESTIMATED+GROUND+TRUTH+FILE);
 ~~<del>$````````````````````````````````</del>
 · * * 56' SE SEEST FY ATFORGACION OF TRUTH FILE)
 8 * 0
. ) :
  PROCEOURS AFERENT ESFEREQUENCY FSCANFORT INTRATION FALPHAR
SEGIN
  UP HUP AVE (FE17+ME) SEESTIMETEDEEMITTEREPARAMETERSEFILE):
 ESRETEST (FE174NELSESTIMATEDEEMITTERAPAPAMETERSAFILE):
 LAKAGORDAN LUNDLI £EL £E&F QIJND (
 FAILWET SAESITMATEDAEMITTERAPARAMETERSAFILET:
  AHILE RECOMMENDUAN OO
 ساملو شافون
   EFESAVOS(FE)/60FLSEPSTIMATEDEEMITTEREPARAMETERSEFILE.
 E 4734 01);
            GEOGRAPHEL SEFFEGUENTY ESCANADATA IN
             O+161+1ELS+EMITTER+TRANSHISSION+FREQUENCY+DATA
 24-89POATE (F+17+ VEL S+ESTIMATEU+EMITTER+PARAMETERS+FILE);
 ESBRESUS (FETTENFLS+FSTIMATED+FMITTER+PAPAMETERS+FILE,
EETSAYO!):
 EEBNEYT (F+17+4ELS+ESTTMATED+EMITTER+PARAMETERS+FILE);
  MECOPO-FOUND :# EFAFOUND(
LANT THE ELSEESTIMATERNE STITE HAPAKAMETERS OF ILES
  ١,
```

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17-Mar-1983 17:42:51
                                                                        VAX-11 P
                                                17-Mer-1983 17:19:39
                                                                        DISKSUSE
            --- Source Listing
  END
   PROCEDURE A+09+NELS+MAKE+SENSOR+REQUESTS+ALPHA;
          D+005+ASET+*SG+SOURCE+DATA := NELS
         10+004+ASET+MSG+NAME+DATA := MN+10+NELS+SENSOR+REQUESTS
         +D+002+ASET+MSG+DERT+DATA += ASE
         :0+125+REQ+DESTINATION+SENSOR+IU+DATA := GPS+NELS+1
         :D+126+REG+REPORT+INFORMATION+TYPE+DATA := EE6UNKNWNVAL
         <del>idalzikregasensoratargetaldanfal</del>nterestadata (±± e<u>eaunk</u>nwnya<u>l</u>
         +D+135+SENSOR+ID+DATA := NELS+GPS+1
  EE8FORM(M+10+NELS+SENSOR+REQUESTS+MSG+0");
  END;
   PROCEDURE AGIOANELSAMONIEYAORBITAALPHA:
                VAR DREAL : REAL
       IBEGIN
         IF 0+135+SENSOR+ID+DATA IN
           [NELS+GPS+1, NELS+GPS+2, NELS+GPS+3] THEN REGIN
  BEGIN
  EEBUPDATE(F+06+FLIGHT+PROFILE+FILE);
  EE8FIRST(F+06+FLIGHT+PROFILE+FILE);
  RECORD+FOUND := EE8FOUND(
  F+06+FLIGHT+PROFILE+FILE);
  WHILE RECORDARDUNC DO
  BEGIN
    EE8SAVDS(F+06+FLIGHT+PROFILE+FILE,
  EE7SAVO1):
            DREAL := D+041+FLIGHT+WAYPOINT+X+DATA ;
EEBUPDATE(F+06+FLIGHT+PROFILE+FILE):
  EEBRESDS(F+06+FLIGHT+PROFILE+FILE,
  EE7SAV01);
 EFANEXT(F+06+FLIGHT+PROFILE+FILE):
  RECORD+FOUND := EE8FOUND (
  F+06+FLIGHT+PPOFILE+FILE)
  END.
  END
  BEGIN
  EEBUPDATE (F+32+SENSOR+ORBIT+MODS+FILE);
  EEBFIRST(F+32+SENSOR+ORBIT+MODS+FILE);
  RECORD+FOUND := EE8FOUND (
  F+32+SENSOR+ORBIT+MCDS+FILE);
  WHILE RECORD FOUND CO
  BEGIN
    EEBSAVDS(F+32+SENSOR+ORRIT+MODS+FILE,
 EE78AY01)+
   REGIN
  EE8CREATE(F+06+FLIGHT+PROFILE+FILE)
                                       E-142
```

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17-Mer-1983 17:42:51
                                                                                                                                                                                  VAX-11 >
                                                                                                                       17.Mere 1483-17118434 -- #18KBUE:
                                TE ATACAKTMICOPYAMTHOLIGHT IE
                        SUCCEPTED BY AND INTERPORT OF SECTION OF SEC
                                     Delle-PLATFORM-MOD-Y-DATA
                                 ማንቀህነቸዋል፤ <u>ትር</u>ተለፈቀለላ ለይህቷን "ሞ፟ጃቀውም "ማ - 4.8
                                     DeligePLATFORMEMODEZEDATA
                        F 477 9
 ERUNAUN-FECH+37+SENSCR+OPSIT+MODS+FILET;
  LFURESUS (F#32+SENSUR+ORBIT+MODS+FILE,
  1120846133
    PARTIES AR JUNEAU RELEGIOUNDO
  F+52+7c1598+URBIT+MCUS4FILE)
A 16
+- ----
 ENDS
  PROCEOURE 4+11+NELS+MODIFY+TASH+ALPHA:
        ---- 445 } -- INTEGER---
                               TAREAL : REAL
           建设管理系统
               IF 00056-NEEDED-FRASIBLE-CATA IN 1801, A01, BOTH) THEN BEGIN
                    DE139-TASKERUE-ID-DATA IN DE139-TASK-QUE-ID-DATA
                     INTELLIBRITE CONTA IN DOLUMENTALIA
10+005+45ET+M8G+SOURCE+DATA 1# NELS
                     13+004+4SET+MSG+NAME+DATA 1= MN+13+NELS+TASKING+RESPONSES
    ARE BE ATAMORES ON SEASE THE SEASE T
 of GlN
  SERIP ATT (FOURSELIGHTOPRORTLEARSLE);
  EE8F1457(F+05+FLIGHT+PROFILE+FILE);
  RECORDATIONS := EFBEOUND (
 FAULOFY CHICPEDETLE AFTLE ) ....
  PHILE PECCHEPEUDNE DO
 SEG1 V
      EER. ALUSTE DO DE LIGHT DE PROFILE DE LE.
 Esteavet);
                         OREAL IN CODALORLIGHICHICHICAYPOINTOXODATA
 EEBIFLATE(FOURHELIGHTOMRUFILEOFILE);
 LEAGESOS (F+06+FLIGHT+PROFILE+FILE,
 EE7SAVC114 .
 EF8 WEXT (F+UA+FLIGHT+PROFILE+FILE);
 RECORCEFOUND := EESFOUND(
 FACKAFLIGHTAPROFILEARILE) _
 END
 ٤.0
```

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17-Mar-1983 17:42:51
                                                                      VAX-11 P
                                               17-Mes-1983 17:19:39
                                                                      DISKSUSE
                 Source Listing
  EE8CREATE(F+06+FLIGHT+PROFILE+FILE)
           ; D+C41+FLIGHT+WAYPCINT+X+DATA := D+143+X+LOC+FEASIBLE+DATA
           ID+042+FLIGHT+WAYPOINT+Y+DATA I= D+145+Y+LOC+FEASIBLE+DATA
           +De0434FLIGHT+HAYPOINT+Z+DATA +# 0+0
 END
  EE8FORM(M+13+NELS+TASKING+RESPONSES+MSG+UUT);
  END:
   PROCEDURE A+12+NEL5+PERFORM+SIGNATURE+ANALYSIS+ALPHA;
                 DEGIN
BEGIN
  EEBUPDATE(F+17+'NELS+ESTIMATED+EMITTFR+PARAMETERS+FILE);
  EEBFIRST(F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE);
  RECORD+FOUND := EE8FOUND(
  F+17+NELS+ESTIMATED+EMITTER+PARAMETERS+FILE)
END
__BEGIN__
 EEBUPDATE (F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE);
 EE8FIRST(F+18+NELS+ESTIMATED+GROUND+TRUTH+FILE);
  RECORD+FOUND := EF8FOUND(
 F+18+ NELS+ESTIMATED+GPOUND+TRUTH+FILE1
 END
 EF8CREATE (F+25+MELS+TYPED+EMITTER+REPORT+FILE)
           ; D+174+MELS+EMITTER+BANDWIDTH+DATA 1=
             D41594NELS4EMITTER4FREGHENCY4RANDWIDTH4DATA
           +2+177+MELS+EMITTER+CEP+DATA := D+068+NELS+EMITTER+CEP+DATA
           ID+070+MELS+EMITTER+COV+DATA IN D+070+NELS+EMITTER+COV+DATA
           $D+074+NELS+EMITTER+FREQUENCY+DATA 18
            :941664NELS4EMITTER4ID4DATA := D41604NELS4EMITTER4ID4DATA
           ;D+167+MELS+EMITTER+X+DATA :=
             D+16A+NELS+EMITTER+Y+DATA :=
              T+163+NELS+EMITTER+Y+DATA :
  De169eNELSeE'ITTEReZeDATA :=
              5+164+NELS-EMITTER+Z+DATA :
           Del78enFLSeFMITTEPeMODULATIONeTYPEEDATA 15
            Deu77enELSeEMIITEREMODULATIONETYPEEDATA .....
           : 0+179+MELS+EMITTER+TIME+OF+LOCATION+DATA :=
             D+063+NELS+FMISSION+STAPT+TIME+DATA
          .1D+1B0+NELS+EMITIER+TPAFFIC+TYPE+DATA 1# POTENTIAL+THREAT
           10+170+9CFNAWTO+GEN+ID+NUM+DATA :=
             D+145+SCENAFIREGEN+ID+NUM+DATA
```

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17-Mer-1983 17142151
                                                                    VAX-11 F
                                            - 17-Ner-1983-17119139
                anunce wishing
 E403
  VAS BREAL : REAL
      #BEGIN
 EFECHEAVE (F43%+SENSOR+PLATFORM+LUCATION+FILE)
         ID-124-PLATFORM-LOCATION-X-DATA IX D-014-ASP-LOC-X-DATA
      - - - 4D+1-54PLATEDRM+LUCATION+Y-DATA - += D+015+A8P+LOC+Y+DATA
         TENTE TO PER TENER PLOCATION + Z+DATA IS D+016+ASP+LOC+Z+DATA
         :D+ )05+ASET+MSG+3UURCE+DATA ## NELS
         1940346ASET+MSG+NAME+DATA 18
    SEL ET ATAGOTERBONDETENDATA ET ASE
 17 3FURM (44074-12 SAPLATE ORMALOCATIONAREPORTSAMSGADUT);
 END:
 - INACCEOPINE TATIOTIC TATORICE SONCONNANDE DRANGE OF THE NEW 1847 PART --------
               MAD PREAL : PEAL
     :SFGIN
        TE (SHOWSEFIEST+CMORS+RER+UPDATE+DATA = IN+APEA) OR
           (henunefistecmonseredeuphateepata # Outsideearea) OR
          CONTACTOR - ISAMODULATED) OR
          (MAY STASEFONDACHERSAMEDAUPDATEADATA # IRANOTAMODULATED)
          THE ! TREAL := 0.0
 BEGIN
 LEBUPPATE(F+20+NELS+PRE+BPIEFFU+ADI+FILE);
_EEBFIRST(F#23+ NELS+FRE+SRIEFER+ADI+FILE);
 APROADEROUSE HA EESTO MOL
 FARMARE SAMPES OF IEFFOAROIAFILE):
....aHILE RECORDERATION OF ....
   RESSAVOR (F-204 NELS+PRE+991EFED+AD1+FILE,
- 4 134 b . L .
          NACOTATEL SAPOSAMPISEDULADIALONERALEFTAXADATA 12
       TENUPPATERFAZAMMEN SAPREABRITEEDANDIAFILE):
 EFERESCRIFFROENFLSFRAFFARHTEFEDFAOIFFILE.
 EE.754×3114 ---
 EFANETTIFAEON RUSHOVEAHOIFFEDANDIAFTLE);
 RECORDAFOUND := EFAFOUND(
 FAZIANEL GAPREADRIEREDADDIAFILE) ........
 END
 END
 FFGIV
 , Entro tate (Fedita E' SAOPEARTIFFEDASTIAFTLE);
 ERBFINST(F+21+NFLS+F-F+MMTEFEN+SUI+FILE);
```

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17-Mer-1983 17:42:51
                                                                         VAX-11 P
                                                 17-Mer=1983 17:19:39
                                                                        DISKSUSE
               -- <del>Snurce Liati</del>na
  RECORD+FUUND := EE8FOUND(
  F+21+MELS+PRE+BHIFFED+SOI+FILE); --
  WHILE RECORD FOUND DO
  BEGIN
  ... EEBSAVDS(FA21ANFLSAPREARRIEFEDASOIAFILE,
  EE7SAV01);
          Delogenel SepreeBrieffDeSOIeENDeFREGeDATA :=
             D+103+"TLS+PRE+BRIEFEU+SDI+EMD+FRED+DATA ;
  EEBUPDATE (F+21+N2L3+PPE+BPIFFED+SGI+FTLE);
___EEBRESOS(F+21+NELS+PRE+BRILFEN+SUI+FILE,
  EE7SAVO1);
  EEBNEXT(F+21+NELS+PRE+BRIEFFD+SOI+FILF);
  RECORD+FOUND := EESFOUND( .....
  F+21+NELS+PRE+BRIEFFO+SOI+FILE)
  END
__END_____
  END:
   PROCEDURE A+15+NFLS+PROCESS+PRIORITIZEN+SENSOR+DIRECTIONS+ALPHA;
            VAR I : INTEGER
             INREAL I REAL
       1BEGIN
         IF ((D+056+NEEDED+FEASIBLE+DATA = SOI) OR
             (D+056+NEEDED+FEASIBLE+DATA = ADI) OR
            (D+056+NEENED+FEASIBLE+DATA R BOTH)) AND
            ((0+135+SENSOP+ID+DATA = NELS+GPS+1) OR
            (D+135+SFNSOR+ID+DATA = NELS+GPS+3) OR
            (D+135+SENSOR+ID+DATA = MELS+GPS+3))
            THEN DREAL := 0.0
         ; I := D+137+SENSOR+PPIDRITY+DATA
 BEGIN ...
  EEBUPDATE(F+0F+FEASIBLE+ACTIVITY+AREA+FILE);
  EE8FIRST(F+05+FEASIPLE+ACTIVITY+AREA+FILE);
  RECORD+FOUND := EE8FOUND(
  F+05+FEASIBLE+ACTIVITY+ARFA+FILE)
  END
  ;DREAL := 0+143+X+LOC+FEASIBLE+DATA
  BEGIN
 EEBUPDATE (F+10+NELS+FREQUENCY+SCAN+FILE);
  EEBFIRST (F+19+NELS+FREQUENCY+SCAN+FILE);
 RECORD+FOUND := EESFOUND(
  F+19+NELS+FREQUENCY+SCAN+FILE);
  WHILE RECORD+FOUND DO
  BEGIN
   EEBSAVDS(F+19+NELS+FREGUENCY+SCAN+FILF,
  EE7SAVO1);
   BEGI"
           D+092+NELS+FPER+SCAN+LOWER+FRED+DATA :=
```

```
VAX-11 F
                                            17-Mar-1983 17:42:51
                                           --17-Mar-1983-17:19:39 -- DISKOUN!
           DENGTO NELSEFRERESCANELOWER OF REGEDATAL
         040934NELS4FREQ4SCAN+UPPER4FREQ4DATA END +
  Seturiales (190 MELS+FREQUENCY+SCAN+FILE);
EF . . . . . . . . . . . ILL SAFFEDUENCYASCANAFILE);
  ALTONO TERMENT
  F+19-NELS+FREQUENCY+SCAN+FILE)
  CNU
  -LAG
  1043
   PRO. 2 RE A+16+NELS+PROCESS+REQUESTED+DATA+ALPHAS
       - TAB WIEST - BEST
THEN DPEAL IN 0.0
EEBLETATETE+07+GROUP+TAPGET+LOCS+FILE);
  EFSFIRET(F#974GPQUP4TANGET+LOCS+FILE);
- RECORDAFOUND 15 EESFOUND (
  F+07+121UF+YAPGET+LOCS+FILE);
  WHILE RECORD FOUND DO
    ELBSAVUS (F+0)+GROUP+TARGET+LOCS+FILE,
  FEISAVOTIE
          GREAL := D+048+GROUND+TARGET+LOC+X+DATA ;
  EE: SPOA E (F+07+GROUF+TARGET+LOCS+FILE);
- EFARESAS (EANTAGROUPA TARGETALOCSAFILE, -
  EF7SA/01):
  EFTOE AFF-+07+CHOUP+TARGET+LOUS+FILE);
- ACCOMPANDIA += SEMFOUND(
  ++07+GROUP+TAPGFT+LCCS+FILE)
  ENC
--- END
HEGIN
  EEBUPDATE(F+06+FLIGHT+FROFILE+FILE);
  EFSFIRST(F+)o+FLIGHT+PROFILE+FILE);
** SECONDAFOUND AT EESECHADE
  F+06+FLTG+1+PPOFILE+FTLE);
  AMILE PECORNOPULAD DO
EE8SAVUS(F+00+FLIGHT+PROFILE+FILE,
  EF7SAVG1);
          PASAIAFLIGHTANAYPOINTAXADATA :=
           DendieFLIGHTEHAYPOINTEXEDATA ;
  EESUPVATE(FOGAFFLTGHT+PROFILE+FILE);
  EFBRESDERT HOSAFILICHTAPHOFTLEAPILE,
                                  E-147
```

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17-Mar-1983 17:42:51
                                                               VAX-11 P
               Source Listing
                                       - - 17<del>-Mer-1983</del> 17419439
                                                              DISKSUSE
 EE7SAVO1);
 EE8NEXT(F+06+FLIGHT+PROFILE+FILF);
 RECORD+FOUND := EE8FOUND(
 F+06+FLIGHT+PROFILE+FILE)
 END
 END
 END:
 PROCEDURE A+17=NELS+SENSOR+STATUS+ALRHA;
              YAR PREAL : REAL
     1BFGIN
       DREAL := D+014+ASP+LOC+X+DATA
    +D+091+NFLS+FREQUENCY+SCAN+DATA +=
         D+091+WELS+FRERUENCY+SCAN+DATA
 REGIN
 EEBUPPATE(F+06+FLIGHT+PROFILE+FILE):
 EEBFIRST(F+064FLIGHT+PROFILE+FILE);
 RECORPARGUND := EESFOUND(
 F+06+FLIGHT+PPOFILE+FILE);
 WHILE MECORD FOUND DO
 BEGIN
   EE8SAVOS(F+06+FLIGHT+PROFILE+FILE,
         PREAL := D+041+FLIGHT+HAYPOINT+X+DATA :
EEBUPPATE (E+06+FLIGHT+PROFILE+FILE):
 EE8PESDS(F+06+FLIGHT+PROFILF+FILE,
 EE7SAV01);
 EFBNEXT(F+06+FLIGHT+PROFILE+FILE):
 RECORP+FOUND := EF8FQUND(
 F+06+FLIGHT+PROFILE+FILE)
 END
 END
 BEGIN
 EEBUPPATE (F+20+1.ELS+PRE+BPIFFED+ACI+FTLE);
 FF8FIPST(F+20+LELS+PHE+BRIEFEC+ADI+FILE);
 RECORPEROUND := EE8FOUND(
 F+20+NELS+P4E+BFIEFFD+A0I+FILE);
 MHILE RECORDEFOUND CO
 BEGIN
   EEBSAVOS(F+20+NFLS+PRE+PHILFED+AGT+FILE,
__EE7SAYG1);
         PREAL := 0+097+NELS+PRE+PRTEFED+AGI+LUMER+LEFT+X+DATA
 EEBUPDATE (F+20+NELS+FRE+BPIFFED+A01+FTLE):
 EEBPESOS(F+20+NELS+FRE+RRTEFED+AUI+FILE,
 EE784V01 11
 EEBNEYT (F+20+NELS+PPR+6FIFFFD+ADI+FTLE);
```

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17-Mer-1983 17:42:51
                                                                VAX-11 F
                                                                DISKSUSE
  RECORD+FOUND := EEBFOUND(
  F+20+NELS+PRE+BRIFFEU+A0I+FILE) -
  END
  END
  BEGIN
 EEBUPDATE(F+21+HELS+PRE+BRIEFED+SOI+FILE);
  EEBFIRST(F+21+NELS+PRE+BPIEFED+SOI+FILE);
  RECORD+FOUND := EEBFOUND(
F+21+HEL 3+PRF+GCIEFFD+SOI+FILE);
  WHILE RECORDAFOUND TO
  BEGIN
EE8SAVOS(F+21+HELS+PRE+PRIEFED+80I+FILE,
  EE7SAV01);
        DREAL 1=D+103+NELS+PRE+BRIEFED+SOI+END+FREQ+DATA.....
  EEBUPTATE(F+21+HELS+PRE+RRIEFED+SOI+FILE);
 EEBRESUS(F+21+NELS+PRE+RHIEFED+SOI+FILE,
  EE7SAV01);
  EEBNEXT(F+21+NELS+PRE+BRIEFED+SOI+FILF);
 BECONDARCHMU += EE BEOHNU(----
  F+21+NELS+PRE+HPIFFED+SDI+FILE)
  END
EFBCREATE (F+34+SENSCR+STATUS+FILE)
          : D+ J44+ FPERUENCY+SCAN+PARAMETER+DATA 1= 0.0
          +D+136+SFNSOR+MODE+OF+OPERATION+DATA 18 SOI+SEARCH
          JU+135+SENSOR+ID+DATA := NELS+GPS+1
          ;D+005+ASET+MSG+SQURCE+DATA := NELS
         10+002+45ET+MSR+DEST+DATA := ASE
  EFBFOPM(M+11+MELS+SENSOR+SYSTEM+STATUR+MSG+OUT);
  END:
 PROCEDURE ANTRONEL SUSTEMAL OF MINISPESTAFIL TERNALPHAS.
                VAH UPEAL : REAL
       FEGIN
         DPEAL := D+01P+ASP+PITCH+DATA
- ; Die Eal := Unul Chasphal III IUDE nata
         : THEAL := D+C14+ASP+LOC+X+DATA
        :PREAL := D+091+NELS+FREQUENCY+SCAN+DATA
  EFBUPPATE (F+2++"ELS+FRE+PRIFFED+SOI+FILE):
  EFRFIMSTIFERIANFLEOFFENERTEFENESDIEFILE);
  RECORPORED := EFAFORED(
```

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17-Mer-1983 17:42:51
17-Mar-1983 17:19:39
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VAX-11 F DISKSUSE

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F+21+MELS+PME+8RIFFEU+SMI+FILE);
 BEGIN
   EF8SAVDS(F+21+NFLS+PRF+9RTEFFP+SOT+FILE,
EE754101)+
            DREAL := C+103+4ELS+PRE+BRIFFED+SCI+END+FREG+DATA
 EEBUPDATE(F+2:+MELS+PRE+BRIEFED+SOI+FILF);
 EEBRESDS(F+21+NELS+FRE+9RIEFED+SUT+FILE,
 EE7SAVOI);
 EEBNEXT(F+21+MELS+PPE+HPIEFED+SOI+FTLE);
RECORP+FOUND := EESFOUND(
 <u>FA21ANELSAPREABRIFFERASRIAFILF)</u>
 END
 EEBCREATE (F+10+"ELS+CANDIDATE+TARGETS+FTLE)
 EEBUPDATE(++14+"ELS+EMITTER+ACTIVITY+GROUND+TPUTH+FILE);
 EE8FIPST(F+14+NFLS+FMITTER+ACTIVITY+GPOUND+TRUTH+FILE);
 RECORD+FOUND := EF8FOUND(
 F+14+NELS+EMITTFR+ACTIVITY+GROUND+TRUTH+FILE)
 BEGIN
 EEBUPDATE(F+15+NELS+FMITTFR+CHARACTERISTICS+FTLE);
 EE8FIRST(F+15+NELS+FMTTTER+CHARACTERISTICS+FILE);
 RECORD+FOUND := EFAFOUND(
 F+15+NELS+EMITTER+CHAPACTERISTICS+FTLE)
 END.
 #D+061+MELS+EMISSION+DURATION+DATA :=
             D+064+NELS+FMISSION+STOP+TIME+DATA -
          Jan63+d+NFLS+EMISSION+START+TIME+DATA
            ; D+062+NELS+EMISSION+SIGNAL+STRENGTH+DATA :=
             D+078+A+NFLS+EMITTER+POWEP+LEVEL+PATA
       :DeG63+NELS+EMISSION+START+TIME+DATA :=
              D+063+8+NFLS+EMISSION+START+TIME+PATA
            #D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA ##
             D+073+3+xELS+EMITTER+FREGUENCY+RANDHIDTH+DATA
            ; D+075+MEUS+EMITTER+ID+DATA := D+075+B+NEUS+EMITTER+ID+DATA
            ; DANESANEL SAEMITTERAXADATA :=
             Densserenel Seemittenexenata;
            D+086+NELS+EMITTER+Y+D4TA 1=
              THOSE PHIELS - EMITTER - Y-DATA ;
         D+087+NELS+EMITTER+Z+DATA :=
               MANATHANELS+EMITTER+Z+DATA +
            SHORIHNEL SHENITTER + THANSHISSION + FREQUENCY + DATA 12
```

Source Listing

DAUGLASANELSAEMITTERATRANSMISSIONAFREQUENCYADATA

;D+130+SCENARJO+GEN+ID+NUM+DATA :=

notteld soruce

DA130+8+SCENAPIO+CEN+ID+NUM+CATA

```
END:
PROCEDURE ##19#2FES#SIGNAL#TO#NOISF#DETECTABILITY#ALPHA;
             MAN THEAL & PEAL
    32FGT%
      PHEAL IT DEGISEASPEPTICHEDATA
      FOREAL IS CHOLINEASPHRUCHXHOATA
BEGIN
EEHUPHATE (F+10+HELS+CANDIDATE+TARGETS+FILE);
EESFIPST(F+10+NELS+CANDIDATF+TARGETS+FILE);
HECOROMFORNO := EFSEDUND(
Enlantel Sacanathate Targetsafile) ----
                                                _______
WHILE RECORDEROUNE OU
BEGIN
 EEBSAVOS(E-10+NFLS+CANDIDATE+TARGETS+FILE, ....
EE754V01);
BECI.
       -Deablanel Saemissionardaationadata 12
          D+Col+MELS+EMISSION+DURATION+DATA
        :U+UA2+UELS+EMISSION+SIGNAL+STRENGTH+DATA :=
         . CANDRALEL SAEWISSIONASIGNAL ASTRENGIHADATA
                                                 :2+0A3+ WFLS+EMISSION+STAPT+TIME+DATA :=
          OF1634"ELS+EMISSIO" +START+TIME+DATA
      - PURGITSANITITERAFREQUENCYARANGAIDTHADATA 18
          0+073+MELS+EMITTER+FREQUENCY+HANDWIDTH+DATA
        :0+075+ WFLS+EMITTER+ID+DATA := 0+075+NELS+EMITTER+ID+DATA
      DEGREENELSEEMITTEREXEDATA:
         SHORMHAFLSHEMITTERHYHDATA :=
          DeudenetseEmitteseveData :
         S+OR7+1-FL9+EHITTEP+Z+DATA :=
           DE0974NELSEEMITTER-ZEDATA ;
        Deadletelsegmilleretransmissioneregouencyedata := -----
          THREIHRELSHEMITTERHTRANSMISSTONHEREQUENCYHDATA
        #3+130+SCENARIN+GEN+19+NUM+DATA 1=
         -3+130+SCENARIO+GEN+10+NUM+DATA
EFBUPTATE (F+10+"ELS+CANDITATE+TARGETS+FTLE);
FEARESUSCE-10-NELSACAMDIDATE-TARGETS-ELLE,...
E5754401);
EFAMERICF + 13+1 ELS+C1NDIDATE+TARGETS+FTLF);
HECOHTOFULLY 12 ELEFLUND(
F+10+'ELS+CAMPINATE+TARGETS+FILE)
E NO.
Et.O
dEG! "
ERBUPDATE (F+24+ FLS+ FEATHFR+CONDITIONS+FILE);
```

```
17-Mer-1983 17119139
         --- Source Line
EEBFIRST(F+26+NFLS+NEATHEP+CONDITIONS+FTLE);
RECONDAFOUND 42 EESFOUND(
F+26+ VELS+WEATHER+CONDITIONS+FILE):
WHILE RECOMPANDUND DO
BFGIA ......
  EE85AVDS(F+26+ NELS+ NE ATHER+CONDITIONS+FILE,
EE754 VQ1):
         ORFAL := 0+144+X+NEATHER+LOC+DATA
EFBURDATE (F+2A+MELS+ #FATHER+COMDITIONS+FILE);
EFBRESDS(Fe2haNFLSamEAIHERACUMDITIONSAFILE,
EE754V01);
EEBNEXT(F+25+HELS+xFATHFK+CONDITIONS+FILE):
_RECORDAFOUND . += EFSFOUND(
F+26+NELS+AEATHFR+CCNDITIONS+FILE)
END
ELD
END;
 PROCEDURE &+20+NFL5+SURVEILLANCE+AND+TRACK+MSGS+ALRHA;
       THOOSHASETHMEGHSTURCEHTATA := NELS
     - : DEDC44ASETEMSG4NAME+DATA := MN+14+NFLS+TRACK+MESSAGE
        $U+0^2+ASET+*SG+DEST+DATA := ASE
        +D+029+CARTO+SECTION+NUM+DATA 1= 1
  :DegazeGRoundetaRGET+LENGTH+DATA := 0.0
       #340504GPUUNDETAPGETEVFLOCITYEDATA := 0.0
       +0+142+TPACK+MESSAGE+UATA := TRACKING
BEGIN
EFBURDATE (F+25+HELS+TYPED+E*ITTER+RFPORT+FILE):
EERFIPSI(F+25+NELS+TYPED+EMITTER+REPORT+FILF):
RECORDA FULLIND := EF#FOUNDE
F+25+ "ELS+TYPFE+EKITTEH+REPORT+FILE);
WHILE RECORD FOUND TO
SEGIA
  EEBSAVOS (F+25+NFLS+TYPED+FMITTER+REPORT+FILE,
REGIT
         DECAREGREE TO BUTTO := GPS+1+NELS
         : DeGAS+SRULMD&TARGET+FREQUENCY+DATA :=
            n+474+1 ELS+EMITTER+FREQUENCY+DATA
          :0+135+SENSUR+JU+DATA := NFLS+GPS+1
EEBCHEATE (F+07+GROUP+TA7GFT+LOCS+FILE)
         10+048+GROUND+TARGET+LOC+X+DATA := D+167+NELS+EMITTER+X+DATA
         JOHUNGHGPOLNOHTARGSTHLOCHYHOATA II DH168HNELSHEMITTERHYHDATA
EEAUPTATE (F+25+MELS+TYPED+EMITTER+REPORT+FILE);
EFBPESUS (FARSANFLSATYRE)AFATTTERAPERDETAFTLF.
EE7SAVO1);
EEBNEYTCH+25+NENS+TYRF3+EMITTFH+REPNATHFINE);
RECOMMERCING 1 := EFAFE MACE
                                     E-152
```

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VAX-11 P

DISKSUSE

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Sounce Edatina
                                                  17-Mar-1983 17:19:39
                                                                           DISKSUSE
F+25+1ELS+TYPFD+E%17TFK+REPORT+FILE)
.E. 44.3.
END
EFBFURM (N+05+NEL S+NCN+SURVETLL ANCE+TARGET+REPORTS+M8G+OUT);
EEBFURX (H+12+VELS+SU-VEILLANGE+TARGET+RFFORTS+MSG+OUT)
EE8FORM (M+14+NEL S+TFACK+MESSAGE+MSG+OUT);
END:
 PROCEDURE 1+21+4FLS+TARGET+ACQUISITION+ALPHA+
                 VAR OPEAL : REAL;
      aFGIN
        DREAL := E+019+ASP+PITCH+DATA
    ..... JOHFAL IS DEGLOSASPEALTITUDESPATA
        ; THEAL := 0+014+ASP+LOC+X+DATA
HEGIN
EFAMPRATE(E-12-DETERTFO-CAUDIDATE-TARGETS-FILE)+
EFAFIST(F+12+JFTFCTE*+CANDIDATE+TAPGFTS+FILE);
RECORPAROJAN := EFAFOUND(
F#12#DETEGICO#CAUNINATE#1ARGETS#FILE)#
WHILE RECORDEDUCT CO
DEGIN
  EEASALUSIE+12+AFTECTED+CANDIDATE+TARGETS+FILE,
EF7SAVOI);
 3EEI.
EFROREATE (F+17+"ELS+ESTIMATED+EMITTER+PARAMETERS+FILE)
           ;DetSRebEUSAEMITTERAFREQUENCYABANDWIDTHADATA :#
               TAISOAKELSAEMTTTERAFREGUEMCYARAMDWIDTHADATA
             IN+077+ FLS+EMITTER+MODULATTON+TYPE+DATA 1# MODULATED
             $neckmenelsedMITIERePONFReLFVELeDATA := 0.0.
             : "+16"+NELS+EMITTEF+TRAMSMISSION+FREQUENCY+DATA :=
              CHIFZH VELSHEN TITE PHTRANSMISSION FREQUENCY DATA
EFACHFATE (FAIRA BUSAERTINATE DAGRUUNNATRRITHAFILE)
           . #T#157eld_SeEMISSIDLeDURATION#DATA :=
             L+127+NELS+EMISSIMN+CHRATICN+DATA
17+154+NELS+EMITTER+IM+DATA := D+151+NELS+EMITTER+ID+DATA
           #DetoPeligi SegMITTFRexeDATA :=
              THISTALELSAEMITTERAXADATA:
             +153+1E15+E"1TTF3+Y+JATA :=
             De15deAELSeECTITERevenata :
            "+164+" ELS+E"ITTEH+Z+UATA :=
              THISTONELSHEMITTER-ZOUATA
            :2416264ELSOFMTTTEROADDATA :=
              0+153+1 ELS+F1 1TTFF+ X+114TA
            +0+143+ VELSHENTTER+Y+DATA :=
             THISOHTELSHEMITTENHYHDATA
            1 JAIAGE OF LISEFF TITE PATAMATA IS
                                      E-153
```

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VAX-11 F

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                                                                       VAX-11 F
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           --- Source Listing
               D+155+NELS+EMITTER+Z+DATA
             ## ATAG+KUA+GI+K32+GIRAL322+ZAI+C+
              D+156+SCENARIO+GEN+ID+NUM+DATA
 _EERCREATE(F+2U+NELS+TDDA+DD+FILE)
              ; N+058+NELS+DD+1+2+DATA := 0.0
             10+060+NELS+D0+2+3+DATA := 0.0
              #D+109+NELS+ThOA+1+2+DATA ## 0.0
             IDellOsSFLS#IDOA#1#3#DATA IZ 0.0
             ; n+111+hELS+T00A+2+3+DATA := 0.0
          END ;
__EEBUPDATE(F+12+DETECTED+CANDIDATE+TARGETS+FILE);
  EE8PESDS(F+12+DETECTED+CANDIDATE+TAPGETS+FILE,
  EE7SAV01);
__EEBNEXT(F+12+DEJECIEU+CANDIDATE+TARGETS+FJLE);
  RECORD#FOUND := EF8FOUND(
  F+12+PETECTED+CANDIDATE+TARGETS+FILE)
END .
  END
  EVO:
PROCEDURE A+22+NELS+TERRAIN+FOLIAGE+SHACOWING+ALPHA+
                 VAR DREAL : REALS
        BEGIN
          DREAL IS DANIRASPAPITCHADATA
        DREAL := D+010+ASP+ALTITUDE+DATA ...
          FOREAL IT D+014+ASP+LOC+X+DATA
  BEGIN
  EEBUPDATE (F+0R+HYPSC+DATA+FILE);
  EEBFIRST(F+08+HYPSO+DATA+FILE);
  RECORD+FOUND := EE8FOUND(
  F+OA+HYPSO+DATA+FILE)+
  WHILE RECORD+FOUND TO
  BEGIN
    EEBSAVDS (F+08+HYPSO+DATA+FILE,
  EE78AV01):
           DREAL 12 C+051+HYPSC+ELEV+DATA 1
  EEBUPDATE (F+09+HYPSC+PATA+FILE);
  EE8RESDS(F+08+HYPSO+DATA+FILE,
  EE7SAY01):
  EEBNEXT(F+08+HYPSO+DATA+FILE);
  RECORD+FOUND := EE8FOUND (
  F+08+HYPSO+DATA+FILE)
  END
  END
                                      E-154
```

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                                                                          VAX-11 F
       Source Listing
                                                -17-Mer-1983 17:19:39 ---
                                                                          DISKSUSE
 BEGIN
EESUPDATE(F+10+NELS+CANDIDATE+TARGETS+FILE); --
 EE8FIRST(F+10+NFLS+CANDIDATE+TARGETS+FILE);
  RECORPORTIONS := EFBEOUND(
 F+10+1ELS+CANDIDATE+TARGETS+FILF);
  WHILE RECORDARDING GO
   EEBSAVUS(F+10+HELS+CANDIDATE+TARGET8+FILE,
 EE7SAV01);
  REGIN
 EEBCREATE (F+12+DETECTED+CANDIDATE+TARGETS+FILE)
          --- JAMATANELSAEMISSIONADURATIONADATA 18
               D+061+NELS+EMISSION+DURATION+DATA
             ID+148+NELS+EMISSION+SIGNAL+STRENGTH+DATA 18
              - U+J42+NFLS+FMISSION+SIGNAL+STRENGTH+DATA
             ; n+149+NEUS+EMISSION+START+TIME+DATA :=
               D+063+NELS+EMISSION+START+TIME+DATA
             +n+150+hEL8+EMITTER+FPEQUENCY+BANDWIDTH+DATA +=
               D+073+NELS+EMITTER+FREQUENCY+BANDWIDTH+DATA
             IN+151+NELS+EMITTER+ID+DATA ## D+075+NELS+EMITTER+ID+DATA
            +C+153+NELS+EMITTER+X+DATA += -
              De085+NELS+EMITTER+X+DATA:
            D+154+NELS+EMITTER+Y+DATA :=
              DOGGOLDE TEREYODATA +
            D+155+NELS+EMITTER+Z+DATA ##
               N+987+NELS+EMITTER+Z+DATA :
             D+152+NELS+EMITTER+TRANSHISSION+FREQUENCY+DATA 1=
               D+OR1+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
             ID+156+SCENARIO+GEN+ID+NUM+DATA IM
               C+130+SCENARIO+GEN+ID+NUM+DATA
         END :
 EE8UPDATE(F+10+NELS+CANDIDATE+TARGETS+FILE);
EEBRESDS(F+10+NELS+CANDIDATE+TARGETS+FILE,
 EETSAVO1);
 EEBNEXT(F+10+NELS+CANDIDATE+TARGETS+FILE);
 RECORDAFOUND += EERFOUND(
 F+10+NELS+CANDIDATE+TARGETS+FILE)
 END
....£ND.....
 END:
  PROCEDURE A+23+NELS+THREAT+TABLE+UPDATE+ALPHA;
 BEGIN
 EEBUPDATE(F+25+NELS+TYPED+EMITTER+REPORT+FILE);
 EEAFIRST(F+25+NELS+TYPED+EMITTER+REPORT+FILE);
RECORD FOUND 12 EESFOUND
 F+25+ME! S+TYPFD+EMITTER+REPORT+FILE);
 WHILE RECORD + FOUND DO
 BEGIN
   EEBSAVUS (F+25+NELS+TYPED+EMITTER+REPORT+FILE,
```

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                Source Listing
                                                   17-Mar-1983 17:19:39
  EE7SAVC1);
   BEGIN
  EEBCREATE (F+13+MELS+EMISSION+THREAT+TABLE+FILE)
            ;D+187+NELS+EMITTFR+BANDWIDTH+DATA :=
                N+176+MELS+EMITTER+BANDWIDTH+DATA
            <del>- ;De183enelseemiiterecepedata := De177enelseemitterecepeda</del>ta
             :D41714NELS4EMITTER+ID+DATA := D4166+NFL9+EMITTER+ID+DATA
            :D+173+NELS+EMITTER+X+DATA :=
              <u>...n+167+AELS+EMITTER+X+DATA;</u>...
             D+174+NELS+EMITTER+Y+DATA :=
               n+168+NELS+EMITTER+++DATA ;
             De175+LELS+EMITTER+Z+DATA 18
               he169+NELS+EMITTER+Z+DATA :
             D+181+NELS+EMITTER+MODULATION+TYPE+DATA :=
               D+178+XELS+EMITTER+MODULATION+TYPE+DATA
             :D+079+NFLS+EMITTER+TIME+OF+LOCATOIN+DATA :=
               D+179+NELS+EMITTER+TTMF+DF+LOCATOIN+DATA
             +U+OBJ+NELS+EMITTER+TRAFFIC+TYPE+DATA 1= ---
               D+180+NELS+EMITTER+TRAFFIC+TYPF+DATA
             :0+172+NELS+FMITTER+TRANSMISSION+FREQUENCY+DATA :=
            Del72+NELS+EMITTER+TRANSMISSION+FREQUENCY+DATA
  EE8UPDATE (F+25+NELS+TYPED+EMITTER+REPORT+FILE);
  EEBRESDS(F+25+NELS+TYPED+EMITTER+REPOPT+FILE,
  EE75AV01);
  EEENEXT(F+25+NELS+TYPEO+E"ITTER+REPORT+FILE);
  RECORPARQUAD := EESFQUAD(
  E425+hELS+IYPED+E+ITTER+REFORT+FILE)
  ENU
  END
   PROCEDURE A+24+RESET+NELS+ALPHA;
  EEBDESTOUY(EC+2+ NFLS+SCF NAPIU+EC);
  EEBDESTPOY(EC+3+NELS+TASKS+EC);
  EE8DESTPOY(EC+4+ VELS+THREAT+EC);
  EF8PESTPOY(FC+5+VFLS+VEHIPLE+CHARACTEPISTICS+EC);
... EEBDESTRAY(EC+6+DETECTED+EMISSIONS+INFU+EC);
  ENDS
   PROCEDURE 4+25+UP6ATE+CAPTO+ALPHA:
                . YAP DREAL : REALS
  BEGIN
  EEBUPTATE (F+02+CATTC+HPTATE+FILE):
  EE8FIPST(F+02+CARTO+UPDATF+FILE);
  RECORPARIONN := EFAFOUND(
```

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                                                                  VAX-11 F
                                                                  DISKSUSE
                Source Listing
                                             17-Mar-1983 17:19:39
  F+02+CARTO+"PDATE+FILE);
  *HILE RECORD+FOUND DO
  BEGIN
    EE8SAVDS(F+02+CARTO+UPDATE+FILE,
EE7SAVO1);
          DREAL := D+033+CARTO+UPDATE+X+DATA ;
- EESURCATE (FAU2+CARIC+UPDATE+FILE);
  EEBRESDS(F+02+CARTO+UPDATE+FILE,
  EETSAVO1);
  EEBMEXT(F+02+CARID+LPDATE+FILE);
  RECORPAROUND := EE8FOUND(
  F+02+CAFID+UPDATE+FILE)
  CAB
      D+G2F+CAPTC+MAP+SECT+NUM+DATA
  BEGIN
  EEBUPDATE(F+01+BRIDGE+LOCATIONS+FILF):
  EEBFIRST(F+01+bRIDGF+LOCATIONS+FILE)+---
  RECORSEFOUND := EFSFOUND (
  F+01+PRTOGE+LOCATIONS+FILF);
- WHILE SECURTAR CUAD CO.
  BEGIN
    EE8SAVDS(F+01+89IFGE+LOCATIONS+FILE.
EE7SAVO1):
          DREAL := 0+026+8PIDGE+LOC+X+DATA ;
- EEBURCATE (F+0)+PRINCE+LOCATIONS+FILE);
  EEBPESDS(F+01+BPIDGE+LOCATIONS+FILE,
  EE754V011;
F+01+"PTUGE+LOCATIONS+FILE)
___ENO.___
  END
  REGIN
  LESTIPOATE(F+U3+CITY+LOCATIONS+FILE);
RECOMPAND := ESHEDIAD!
  F+03+CITY+LOCATTO* S+FTLEJ:
 LARILE RECORDARGULO DO
    EEBSAVDS(F+C3+CTTY+LCCATIOUS+FILE,
EE7544011:
          PHEAL := D+035+CITY+LOC+X+PATA ;
  LEBURTATELE AD SOCITIVOLOCATIONS AFILE) +
  EFBPESUS (FAGSACTIVAL GRATIONSAFILE,
  EE7SAVO1);
  EFHYE > T (F+U3+C1T++L^CA) TOYS+FILF);
  RECOR *FORME := EFBFOUND(
```

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Source Listing

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VAX-11 F

DISKSUSE

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— <del>Scurce Listina</del>
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  F+31+SECONDARY+POADS+FILE);
MHILE SECURDARDUME DO
  BEGIN
    EE884VDS(F+31+SFCCNDARY+ROADS+FILE,
EE7SAVO1);
          OFFAL := 0+131+SFCONPARY+ROAD+X+DATA ;
EEBUPDATE(F+31+SECUNDARY+ROADS+FILE)
  EEBRESDS (F+31+SFCONTARY+ROADS+FILE,
  EF7SAV01);
  EEBMEXT(F+31+SECOHDARY+ROADS+FILE);
  RECORDARDUND := EFBECHAD(
  F+31+SECOMOARY+ROADS+FILE)
__ END_____
  END
  END;
   (A SIBLET PROCEDURES AND HEADERS
                                                    POSF+)
  PROCEDURE 5+1+CHECK+NELS+SENSOR+STATUS+RUR;
  FORWARD:
PROCEPURE S+2+DO+LELS+OPERATIONAL+CONTROL+SUB:
  FOR KAPO:
  PROCETURE S+3+MODEL+NELS+GPS+PROCESSING+SUB:
FORMAROS
  PROCEDURE S+4+MODFL+NELS+PLATFORM+SHB:
  FORWARD:
. PROCEDURE SASAMODELA MELSASENSORASUB:
  FORMAPOI
  PROCEDURE S+1+CHECK+NFLS+SEMSOR+STATUS+3UF:
 LABEL 6.
      4,
BEGIN (* MATH BODY *)
  EENDFLAG:=TRUF;
  IF EEDIAUS THEN ASITELNO! 1,1 1:25,15 BOMET 1,
- !S+1+CHECK+NELS+SENSOR+STATUS+SUB !.
  PREGIOS TO EXECUTED;
  IF EEPIPUS THEN APITEL ACOUTPUT, 1:30, SELECT UM 1,
_ MET+3eNELSeFLIGHT+ET EXECUTES!
  ) :
  EEBUPDATE (ET+3+"ELS+FLIGHT+ET);
 . EEBFIRST (EI+3+1.ELS+FLIGHT+ET):
  AHILE ("OT FERENDS(
  ET#3+MELSHFLIGHT#FT)) AND (MOTE
  (SE140+740+2ATA & IRLE)
  )) DU EFB'EYT!
ET+3+'ELS+FLICHT+FT);
  FOULD :# ELEFOUTOC
  ET+4+"ELS+FLIGHT+FT);
  IF FECTION THEY ARGIN PRITE COUTPUT, 1 1:40, 1FOUND = 1):
  IF FOUND THEN WEITE WOUTPUT, TRUFFI FUSE
  HATTEL WORLD HANT, FALSEIN ENDY
```

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DISKSUSE

```
IF FEDITUR THEM ASITEUN CONTRUT, 1:30, SELECT ON 1,
IFT-SANFLES-BAFFERATEFEN-SUIFET EXECUTES!
EFOURTATE (+ THRHMELS+PRE+BRIFFED+SDI+ET);
EFREIRST (FIASHHELSANDEAGNIEFEDASDIAET):
WHILE CHUT SERCHOSC
ET+5+ ELS+POE+391(FEU+SO[4ET)) AND (NOTC
(DelaGeTabebata = TRUE)
)) NO EESNEYT!
ET+5+NELS+PRE+BPIFFF0+SGI+ET);
Found := EERFound(
ET+5+ "ELS+PRE+BRIEFED+SDI+ET);
IF EETI-OR THEN BEGIN HAITE (OUTPUT, 1 1:40, FOUND = 1);
IE EDDAD INFH WEITELW (DHIRDT, "TRUEN) ELSE
WPITELM (UUTPUT, 'FALSE') END;
IF EETIPOG THER AFTTELN CONTPUT, 1 1:30, SELECT UN 1,
INTEREST EXECUTES!
EFE IF ATELETHRE IEL SHOPEHBRIEFEDHADIHET);
EERFIEST (ETARAMELSAPPEANFIEFFUAADIAET);
WHILE (MOT SERENDS)
ET+8+ (ELS+PPE+8PIFFED+401+ET)) AND (NOT)
(Deldelsama = TRUE)
IN THE EFFICENT
ETHRANEL SAFREADPIFFFUAGOIAET):
FOURD IN EESFOURDE
ET+0+ 'FLS+FFE+00IFFF0+10I+FT);
IF EETIT OF THE OFFICE APITE (OUTPUT, 1 1:40, 1FOUND = 1);
IF FUELD THEA WRITELN (GUTPUT, "IRUF") FLEE
HOTTELS (HOTELS, FEALSET) EUD;
IF EEDIFUS THEO SOITELS (* 1:30, FALPHA 1,
!A#17#NFLS#SEUSOH#STATUS#ALFHA!,
1 EYECUTESIN;
A+17+ YEL S+SF 1950+ST 1T/15+41 PHA;
BEGIN (* AND BRAUCH 2 *)
IF FEETING THE PRITELLAND 1:30, COMPUTATINTERFACE 1,
TTO+TEMT..C+asc+COSTAGE+FRCM+OFEST,
* EXECUTES!1;
EE171 '6:=1;
EFRICTITOATT TO GAY THAT UNITED LAFRONANTLES);
EFSETER("TUATTOTOCOADOLACULTRULAFROMANTES
EFCLUCK):
2:8:01 (* 8:0 65 AUC GRANCH 2 *)
35610 (* 805 568064 3 *)
IF COMINGESF INCOMMENCE OF MAPERATION OF ATA
=Talle?
Elia elias
IF TOMERNASH RESEARCH SHE FAMPERATTUNAMATA
#RUT+SUP IF ILLE (CE)
CRICHIBSONS SOME - DEFORMURE PATIONALIZA
# $1. T # S F & 4 C + 1
HER HATSKATE STORALT CA TRALESPATIONALATA
##5J#$65,#JULKSOF1
PRETAILS HATE STORE THE FRE FERATIONADATE
```

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```
#ADI+SEARCH1
 (* 7 HOWARD WILL (* DA GRANDH 5 *)
  IF EEPIPUR THEN PRITELNO 1:30, EVENT
  IF+1+ACTIVATE+SENSUS+EVENT!,
  ' OCCURS ')+
  EFSETEV( ! F+1+ACT) VATE+SF450P+FVEHT
  ,5,0.0+
 -EECLOCK1;
  5: (* END OF OF ARANCH S +)
  END ELSE
  BEGIA
  ARTTELN CONTRUT, ! CONSTRER OR-NOTE DOES NOT COVER ALL!
  , PUSSIBILITIES. SIMULATOR APORTED. 1); HALT END;
  3:END: (* EHO OF AND RRANCH 3 *)
  BEGIN (* AND RRANCH 6 *)
  EENDFLAG: #FALSE:
- STEND: (* END OF ANT BRANCH & *)
1:IF EETIPUG THEW WEITELN(' ',' ':25,'S'B'ET ',
  'S+1+CHFCK+WELS+SENSOR+STATUS+SUB !,
  LEXECUTION ELLOS ! ) +
  END: (* END OF SUBNET PROCEDURE *)
  (* S+1+CMECK+NELS+SEMSOR+STATUS+SUR *)
 PROCEDURE SEZEUDEMEL SELPERATIONAL CONTROLESUB:
  LABEL 4,
       3,
       2, ....
       1;
  BEGIN (+
            CA YOUS NIAM
  EENDFLAG:=IRUF:
IF EEDIGUG THEN APITELA(' '.' ':25, 'S'HEFET ',
  ISHPHOUPHELSHOPERATIONAL+CONTROL+SUR I,
  PREGING IN EXECUTEIN:
  S+4+MODEL+NELS+PLATFORH+SUR:
  IF FEMOFLAG THEN GOTO 1:
- EENDELAGIRIRUF: -----
  (* SUINET *)
  BEGIN (* AND PHANCH 2 A)
EENDFLAG: #FALSE:
  SIENDI (* END DE AND BRANCH 2 *)
  BEGIN (+ AND PRANCH 3 +)
IF FEUTING THEN ARTIFLAC! 1:30. ALPHA 1.
  *1+13+NELS+PLATFORM+LOCATION+MSS+ALPHA*,
  ! EYECUTES!1;
  A+13+HELS+PLATECH"+LOCATION+MSG+ALPHA:
  IF EEPIPUG THEN APITELNO' 1:30, OUTPUT+THTERFACE 1,
  *TO+TIMTHG+AND+CONTROL+FROM+NELS*,
  ' EXECUTES'):
  EE1TI'E:=0;
  EFBTUI(TO+T) TING+AND+CONTRUL+FROM+NELS);
EESFIE V ( ! TO + | T MING + AND + CONTROL + FROM + NELS
  ,6,0.0+
  EECLOCK1:
 BIENDS (A END OF AND BRANCH 3 A)
  HEGIN (+ AND RHANCH 4 +)
  S+5+MODEL+NELS+SEMSCF+SUB;
  IF EE'DFLAG THEN GOTO 4:
  EFNOFLAGI=TRUF;
```

(SA148ATUSATA # TRUE)

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```
1) DO EFBLEXTO
  ETO16HELSAEMISSIDHATHREAIAET);
  FOUND := FEPFOUND!
  ET+1+MELS+EMISSION+THREAT+ET);
__ IF EEDIFUG IMEN MEGIN NEITE (OUTPUT, ' 1440, 'FOUND = ');
  IF FOUND THEN PRITELACOURPUT, TRUET) ELGE
   WOITELM (OUTPUT, 'FALSE') END;
  IF EEDING THEY ARTIELN( 1 1:30, 1ALRHA 1,
  14+23+NELS+THREAT+TAPLE+UPDATF+ALPHA1,
   ' EXECUTES!);
  A4234NELS6ILRFAT&TARLFAURDATEΑ
  (* PEJOIN *)
  2:E40: (* E10 OF 447 FRANCH 2 *)
BEGIN (* ALC HKANCH 3 *).
   IF FEDIRUG THEN ARITELN(1 1:30, 'ALPHA 1,
   *A+OH+VFLS+FRFULE: CY+SCAN+OPTIMIZATION+ALPHA*,
   ' EXECUTES!1;
  A+OP+VELS+FPETUENCY+SCAN+PPTIMIZATION+ALPHAS
   STENOT (* E U UF AND ARBUCH 3 +)
  EFNOFLAG: # LLSE;
  1:15 EFFIPUR THEN ARITELN(' ',' 1:25, 'SUANET ',
   'S+3+"UNEL+"ELS+GPS+PPQCESSING+SUR";
  'EXECUTION ENDS'):
  END: (* FID OF SUBNET PROCEDURE *)
   (* 3+3+100EL+NELS+GPS+PROLESSING+SHB *1
  PROCEDUPE SHAHMODELANFLSEPLATEORNESUS;
  LAREL 1:
             C* YOUR MYA"
   BEGTH (*
  EENDELAG: ATRUF: ..
   IF EEMIFUR THEY WEITELNEY 1,1 1:25,18 HHET 1,
   15+4+"( DEL+NET SAFLATFOR 4+5119 1,
  'SEGINS ID EXECUTE'D:
   IF EEDIPUS THEN ARITELN (OUTPUT, 1 1:30, 1 SELECT ON 1,
   'ET+3+NELS+FLIGHT+ET FXFC"TFS'
  ) :
  EFRINDATE (ETHRADEL SHELL CHICATOFT);
  EFOFIMST (ETHTHNELS+FLIGHT+FT);
   WHILE C'UT EERENUSC
  ET+3+1ELS+FLIGHT+FT)) AND (NOT)
   (De140eTSDEDATA = TRUE)
  J) DO EEDHEXTE
   ET+3+ "ELS+FLIGHT+FT1;
  FOUND := FEFFOUNDE
  Ele3e%EL3eFLIchTeEI): -
  IF FEDIRUG THEN BEGIN ARITECCUTPUT, 1 1:40, FOUND = 1);
IF FOUND THEN ARITEL ACQUIRUT, THUE TO FLOE
  MRITEUN (QUIP STA 'FALSE') E'O:
   IF REDITION THE . . FITELS (1 1:35, LALAMA 1,
   18402+GFNEWATEHT VEGBLONG!,
   ' EYECUTES!);
  A+02+FE* ERATE+DHE+ALP 14:
  IF EFFIELD THEN ARITELNET TERM, TALPHA T.
   TAPOSPOS VEHATEPINSHALPHILL
   * EXECUTESING
  A+03+4E+E9ATE+IMS+ALFHA;
IF EEMTHUD THE FALITELIST TESO, FALE (A. 1)
   *A+01+1*E+1*S+ : *1*E+GENERSTIC* +ALPHNI,
```

```
' EXECUTES!);
**Ol*gri*178*rfif@t*CFnEB#110#**FB##* . . . ..........
EFINELAGIEFALSE:
1:IF BEDITUR THEN WRITELNO! 1,1 1:25, SUBNET 1,
ISAMAMODELANELSAPLATEDRHASUR I.
"FAFC-TION ENDS"):
END: (* F.O OF SURNET PROCEDURE *)
(* SEMEMOUFLEDTESEFLATFORMESUB *) · ·
PROCESURE 5+5+400EL+NELS+SENSOR+SUB;
LASEL 1:
REGIN 440 LATE 300Y 4)
EENOFLAG:=TRUE;
IF FEDITUS THEN ASITEUN(* 1,1 1:25,1898MET 1,
'Sasalionelatel Sastasorasor ',
PREGINS TO EXECUTE 1);
IF FE TITUS THEN ARITELN COUTPUT, 1 1:30, I SELECT ON 1,
!ETAGANFLSAVEHICLEACHANACTERISTICSAFT EXECUTES! ..
):
EFBUIF ATE (ET+++1EES+VEHTCLE+CHAPACTERISTICS+ET);
EEBFIRST (ET+6+\ELS+VEHICLE+CHARACTERISTICS+ET):
WHILE (MOT FERENUS)
ET+6+ ELS+VEHTCLE+CHARACTERISTICS+ET)) AND (NOTC
(De140eTbReDATA = TRUE)
ITY SURFAG OF TE
ET+6+ ELS+VEHTCLE+CHASACTESTSTICS+ET);
FOULD := FERFOUND(
ET+6+ DELS+ VEHICLE+CHARACTERISTICS+ET);
IF EEDIAUG THEY HEATH MRITE CONTRUT, 1 1:40, FOUND = 1);
IF FOUND THEM WRITELW(COTPUT, 'IRUF') FLAF.
APITEL NOUL TRUT, "FALSE") E'U;
IF EE HAGE THEN WEITELN CONTROL, 1430, SELECT ON 1,
!FIEZENELSEEMTITEREGROUNDEIRUTHEET FXECUTES!
EESHPOATE(ET+24' ELS+EMITTER+GROUND+TRUTH+ET);
EE8F1"at (CIOP+ NELSOE ATTTEROGROUNDOTRUTHOET);
WEILE (191 FERE195)
ET#P#1ELS#E01TTF##GPG0m3#TKUTH#FT1) ADD (MOT)
(DeluceTubeCatA = IbuF)
)) OU FAMENTA
ET+2+ ELS+E*ITTFH+GFUUND+TRUTH+FT);
Flynd := FERFound(
ETHRAMFLOAEMITTE HOSPONNOATRUTHAFT);
IF FEF 1700 THEN SEGIN WOSTE (OUTPUT, 1 1:40, FOUND # 1);
IF FOLKS THE ERRITED (COMPUT, TRUE!) FUSE
ACITEUR (UNITAUT, "FAUSE") ENU;
IF FENITUS THEA AMITEUR (* 1:30, "ALPHA ",
'A+18+NFLS+SIGNAL+GF+INTEREST+FILTER+ALPHA',
* Exerutesis:
A+1H+ ELS+STS- NL+ F+1NTFPFST+FILTSH+ALPHA:
IF EETITUS THAT ATITAL ACQUIPUT, 1:30, SELECT ON 1,
PRITASHARLEAGARAMATERECASATART EYERUTESI
):
EEBHPUATETETESE IE! SEPREESFIEFFUESGIEET);
ETHEN ELGENHER TIFF HE MEET AND THOSE
(Detaile 75 tellard = 176 F)
                                            E-165
```

```
)) DO EEBLEXT(
 -EIASANELSAFREABRIFFEGASOIATI);
  FOUND := EEFFOUR )(
  ET+5+NELS+PRE+6PIFFTU+S0I+ET);
  IF EEDIRUG THEN REGIN ARITE (OUTPUT, 1 1:40, FOUND = 1);
  IF FUNNO THEY APITELN COUTPUT, ITRUFFS FLEE
  APITELM (U"TPUT, TRALSET) ETH:
  IF EEDIBUG THEN MEITELAC! 1:30, 'ALPHA 1,
  "A+O5+NFLS+ARFA+OF+INTEPEST+FILTER+ALPHA",
  ' EXECUTES!);
  ACOSENEL SCAREACOFAINTERESTOFIL TERCAL PHA:
  IF FEDIAUG THEN ADITELNOUTPUT, ' 130, 'SELECT ON ',
  *ET+#+NFLS+PRFERHJERED+AUI+ET EXECUTES*
  EEBUPPATE(ET+R+NELS+PRE+BRIEFED+AC1+ET):
  EF8FIRST (ET+8+NELS+PPE+BRIEFFD+A01+ET);
 AHILE (MOT EERENAS)
  ET+3+"ELS+PPE+APIFFEL+A01+ET)) AND (NOT)
  (D+140+TBD+DATA = TRUE)
 1) DC EFACEXIC
  ET+8+ LEUS+PRE+BPIEFF0+401+ET);
  FOUND := EEAFOUND(
EI484NELS4PRE4BRIEFEU4ADI4ET);
  IF EEPIPUS THER SEGIA PRITE(SUTPUT, 1 1:40, FOUND = 1);
  IF FUUND THEN PRITELNIQUIPUT, TRUFT FLAE
  ARITELNIJUIRUT, 'FALSE') ENC:
  IF EEDIPUG THEN WEITELN (OUTPUT, 1 1230, 1 SELECT ON 1,
  'ET+7+NFLS+AEATHE9+ET EXECUTES'
  EEBUPDATE (ET+7+NELS+4FATHER+ET);
  EE8FIRST (ET+7+"ELS+WEATHER+ET);
  WHILE (NOT EEPENOS)
  ET+7+1'ELS+4EATHER+ET)) AND (NOTC
  (D+140+TBD+DATA = TOUE)
  1) DO EFBNEXT!
  ET+7+NELS+NEATHER+ET);
  FOUND := FERFOUND(
  ETOTONEL SOMEATHEROET);
  IF EEDIRUG THEN BEGIN WRITE (OUTPUT, 1 1:40, FOUND # 1);
  IF FOUND THEN APITELN (OUTPUT, TRUE!) ELSE
  WRITELN (OUTPUT, 'FALSE') ENU;
  IF EEDIRUG THEN ARITELNO! 1:30, 'ALPHA !,
  'A+19+NFLS+SIGM&L+TC+NGISE+DETECTABILITY+ALPHA',
  ' EXECUTES!):
  A+19+NELS+STGNAL+TO+NOISE+DETECTARILITY+ALPHA;
  IF EEDIAUG THEN APITELN (OUTPUT, 1 1:30, 1 SELECT ON 1,
  'ET+9+SIGNAL+HGISE+CANDIDATE+TARGETS+ET_EXECUTES!
  EEBUPPATE (ET+++SIGMAL+NOISE+CANDIDATE+TARGETS+ET);
  EEBFIFST (ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET);
  WHILE (NOT EEGENDS)
  ET+9+SIGNAL+NOISE+CANDIDATE+TARGETS+ET)) AND (NOT(
  (De140eTEDeDATA = TRUE)
  )) DU EFANERT(
  ET+9+SIGNAL+HOISE+CANDIDATE+TARGETS+ET);
  FOUND I= FEBFOUNCE
  ET+9+8IGNAL+NOISE+CANDIDATE+TARGETS+ET);
```

IF EEDIFUG THEN AGITELNO' 1:30, INPUTAINTERFACE 1,

*!\\T@#\\E_\$#\$E\\$O#!;

```
. EXECUTES:);
  LEBELUST (INTOANEL SASENSOR) ....
  FOUND: #FERFOUND (INTC+NELS+SENSOR):
  IF (NOT FOUND) THEN BEGIN MPITE(' ':30,'NO MESSAGE ON INPUT⊕INTERFACE!);
  REITELAC! INTONCE SASEASUR!)
   ENO:
  (* IF EFITIME<>FECUTOR THEN ERROR CODE *)
IF (D+QGHASETALSGANAHEADATA
  #MN+01+FS+HFLS+PNIT+AND+ENVIRONMENT+DATA)
   THEN BESIN (* OR BEANCH 2 *)
  IF FEDIPUS THEN MPITEL WELL 1:30 . 'ALPHA 1.
  !A+O4+I"ITIALTZF+"ELS+ALPHA!,
  ' EXECUTES!);
 A+04+INTITALIZE+ ELS+ALPHA:

IF ELDIFUG THEN APITELNO! 1:30, ALPHA 1,
  'A+09+NELS+MARE+SENSOS+REQUESTS+ALPMA',
  ! EXECUTES!);
  A+09+NELS+MAKE+SEMSCR+HEGHESTS+&LPHA;
  IF FERTEUR THEN ARITELAC! 1:30, CUTPUT & INTERFACE 1,
  'TOATININGAANDACO INCLAFROMENTES! ...
  ' EXECUTES!);
  EEITIME:=n;
  EFRICI (IDETIMING AND CONTROL FROM HELS);
  EFSETEV('TO+TYMING+AND+CONTRUL+FROM+NFLS
  ,5,C.C+
EECLOCK1:
  2: (* END UF OR 3PANCH 2 +)
  END ELSE
  IF CO-COHEASET-MSG-LAME+UATA
  = N+15+T+ANT+C+RICP+! ELS)
   THEN MEGIN (+ OR HEATCH & *)
  IF FEDIRUS THEY PRITEING "1:30, LALPHA ".
  14+24+RESET+NELS+ALFHA!,
  1 EXECUTES!):
  A+24+ MESE Y+N'EL S+AL DHA:
  3: (* E'D OF ON TEANON 3 *)
  END ELSE
  IF CLEDOMEASETEN SCHNAMEROATA
  #MN+0Z+NELS+C1RTG+UPD4TES)
  OR (N+00#+4SFT+#SG+N4#E+NAT4
 OP (D+002+0SFT+MSG+40MF+AATA
  #MINHORMMELSHIPPIFFETHTASKS
  DE (POPONOASET - MSG+ WALE - DATA
  #MADEAMELSADARTIAMCRIFICATIONS)
  OR (Dengues SET + RS+ NAME+ PATA
 #MN+05+NELS+PP10HITIZED+SENSUR+DIPECTIONS)
  OR (DeCOCHASTIANTSANANEADATA
  #MANGRANEL SARELINESTEDASTISCHADATA)
  THEN BEGIN (* ON HANCH 4 *)
BEGIN (* 450 REASON 5 *)
  SAIACHEPHANELEASE! SCHASTATUSASUS;
  IF FE'DFLAG INEN GOTE 51
  EENDFLAGISTERS;
  (* 5041.5T *)
  51END$ (* E.G. (F. M.) RHANCH 5 *)
  BEGIN (* STO FRANCH & A)
```

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17-Mar-1983 17:42:51
                                                                               VAX-11 F
                                                                              -DISKSUSE
        17-Mar-1983 17:19:39
 IF TOFORGHASETHMSGANAMEHDATA
THEW SECTY (* OR STANCH 7 *)
IF EEDITUS THEN PRITELN( ' 1:30, 'ALPHA ',
 !a+25+uPijaTF+raRfC+aLPha!,
 ! EXECUTES!);
 A+25+1.PMATE+CAMTHAL HUAT
 71..(a.E.B.QK.OB 054456 7. a)
 Ent ELSE
 IF (SHORAHASETHYSSHEAMEHUATA
 #PARED 34NE L SAGORMANAFRSARECUIREMENTS) ......
 THEY REGIN (* TH BRANCH A *)
 IF EEDIFUS THE WEITELNOUTPUT, 1:30, SELECT ON 1,
 !FIASHAELSAERE#NAIKEENASUIAFI EXECUTES! -
 ):
 EF BUP "ATE (ET+F+ FEL S+FFE+BRIFFFD+SOI+ET):
 EEBF12$T (EI4C40ELSANDE48#IFFFL480I4ET)+ - - -
 WHILE (MOT FERENDS)
ET+5+ ELS+PHE+HPIFFHD+SOI+ET)) AND (NOT)
 (A+140+182+5414 -= - (<del>20E)</del> - - - -
 J) OU EFOREKTY
 ET+5+ HELS+PRE+HPIFFFD+SOI+ET);
 FOLIMA ... FERFORMAC.
 ET+5+NELS+20E+401FFFD+SUI+ET);
 IF SEMINA THE WEST WAITE (GRAPUT, 1 1:10, FROMM) = 1);
 IF FCUAD THEM HOLITELA (GUIRRITA ITRUFI) ELSE
 WRITELM (GATRUT, !FALSE!) EMD:
 IF EEDIPUS THEN ARITELATOUTPUT, 1 1:30, SELECT ON 1,
 'EIGAENFLSGHRFERRIGERGDGAUIGET EXECUTES!
 EFR INTATE (ETOSO+ EL SON DEONDIEFFOGAMINET);
 ERBEIDST (EINTHEELSANDENDEIFERDAADINET);
 HEILE (MOT ELPEMOS)
 ETHREVELSEPPEERRIFFFDERRIFETIN AND INDIC
. (Delideraledata = taug)
 1) No Est Exit
 ETENETEL SERTENCE OF IFF INACIECT):
 Eligible de Electronique.
 ETHANGELSOPPERLOIPFUL HADIAET):
 IF EE MIROR THE A HIGIN ARITEROUTPUT, 1 1:40, FOUND = 1);
 if FOUND THEM HELTE! MIGHTEUT, TRUF!) FLSE
 WEITELNOUTO OF, FEILEET) ETTE
IF REDITOR THEN A ITELTO! TIST, TALBHA !,
TAHI MEMEMBERHOSESSHOMMANDERSHEWMIDEREUTSHAMPHA!,
 1 6/50016511;
 AATOANET SARAGEESSACEMANUE PSARENUTRERENTSAALPHAT
 St falklich uf ok. abatck 8 *)
 END ENSE
 IF (1+) " WELSETH 150H - A - EMBATE
 maned Selleg Seri lokinizhles Pusukebizentiuns)
 THE PENEL OF THE CANTEN OF THE PENEL ! 1:30, 15ELECT ON 1,
 TRIMAMOREDAMENTED ENERGENMENT EXECUTES!
 ERROR WITERITH + FERNE E OF CHASCA HARTIE
 # 3F1 (8) (276 + # 36F & U.F. CY+SCA (+FT);
```

```
ET+4+MET S+FREMUENCY+SCAR+FT)) AND (NOT(
)) DO EEBNEXT!
 ET+4+NELS+FREDUFNCY+SCAN+FT);
- FOUND ta EEAFOURD(
 ET+4+NELS+FPERLE UCY+8CAN+FT);
 IF EEPIAUR THEN HERTE WRITE (UNITPUT, 1 1:40. FUHND = 1):
 IF FOUND THEY ARITELY (OUTPUT, TRUE ! ) FLAE
 WRITELN(OUTPUT, 'FALSE') END;
 IF EEDIBUG THEN WTITELN( 1:30, ALPHA 1,
  I EXECUTES!);
 4+15+NELS+PRUCESS+PRICRITIZED+SENSOR+NIRECTIONS+ALPHA;
9: (* END OF OF BEANCH 3 *)
 END ELSE
 IF (D+004+ASET+MSG+NAME+UATA
MN+04+NELS+MOÙIFIEC+TASK)
  THEN BEGIN (+ OR HRANCH 10 +)
 IF EEDIPUS THEN ARITELN (OUTPUT, 1 1:30, 1 SELECT ON 1,
'EIAJANELSAFLICHIALI EXECUTES!
 EEBUPDATE (ET+3+MELS+FLIGHT+ET) :
EESFIFST (ET#3#NELS#FLIGHT#ET);
 WHILE (NOT FERENDS)
 ET+3+NELS+FLIGHT+FT)) AND (NOTE
(De14CeTSCeDATA = 15UF)
 )) DO EEBNEYT(
 ET+3+NELS+FLIGHT+ET);
 FOUND := FERFOUND(
 ET+3+MELS+FLIGHT+FT);
 IF EEDIEUG THEN BEGIN MOITE (UNITPUT, 1 1:40, 1FOUND = 1);
 IF FOUND THEN APTIEL MONTPUT, TRUE! ) ELSE
 WRITELN (OUTPUT, "FALSE") END:
 IF EEDIPUG THEN MEITELN(1 1:30, ALPHA 1,
  'AG11-NELSGMONIEYGTASKGALPHA!.
 ' EYECUTES!);
 A+11+NELS+MODTFY+TASK+ALFHA;
  IF EEDIRUG THEN APITELNO' 1:30. OUTPUTEINTERFACE '.
  *TO+TIMING+AND+CONTROL+FROM+NELS!,
  ' EXECUTES!):
EEITIME:20:
 EESTOI(TO+TIMING+AND+COMTRUL+FROM+NELS);
 EESETEV('TO+TIME GO+ANO+COMTROL+FROM+NELS
 ebe (-)+
 EECLUCK);
 10: (* END OF OR PRINCH IG *)
 END ELSE
 IF (D+004+&SET+MSC+NAME+DATA
 #MN+06+NELS+UPSTT+400IFICATIONS1
  THEN BEGIN (+ OK HEAVEH 11 +)
 IF EEDIPUG THEN WRITELN CONTPUT, 1 1:30, TRELECT UN 1,
  *FT+3+NELS+FLIGHT+ET EXECUTES*
 EEBUPDATE (ET+3+MEI S+FLIGHT+ET);
 EEBFIPST (ET+R+MELS+FLIGHT+FT);
 WHILE (NOT EEPENOSC
 ET+3+MELS+FLIGHT+FT)) AND (MOTE
                                   E-170
```

```
17-Mar-1983 17:42:51
                                                      VAX-11 P
           Source Listing
                                    17-Mar-1983 17:19:39
                                                      DISKSUSE
VAX#)
PROCEDURE EFSTOR
BEGIN
EFTFR":=TPUE
END
(+VAX -----EERTOPE
                                                         VAX+)
PROCECURE EFREDRE ( VAR EEVEUHNO: BOOLEAN);
 EVT:EEVTPTR;
BEGIN.
 ENT: = FEFE VT; EE VEC: NO : = TRUE;
 IF EVT <> ITL THEN
  BEGIN
   EFCLOCK: = EVIT: EETIME; LECEVI: EEVIT: EEVENI: EEFEVI: EEVIT: EENFXTE; CLUCK+TIME: EFCLOCK;
    DISPOSE(EVI)
  END
  ELSE
    BFGIN
    BEVEOUNDISEALSE: SETERMISTRUE ....
    ENU
END:
```

```
Is the Endament
SEGIN
 FOR LIEFFYLTSTIFECEVI 1.FEDEPPTR1 TO EFVLISTIEFCEVT 1.EEDEPPTR2
   . o : febedus[f]]:#T90€
E . . .
(4)44
PROCERGED LEATERG(EERNAMES FESTER) +
HESIA
F 100
(+VAK ---
PROPERTY EFACTOR (CERPS ADE: FESTR):
46 14 1 1
۽ ٻنا خ
(terefrencesRISE CURE FOLLUASVervencesverversessessessessessessessessesses)
VAX*)
POUR CHIE FESCHES:
VAR
 FEVFOR NO. COULEANS
45 6 11
LERTUPE (EE VF UITIED) ;
 TE FEVELLO FIEL
  . r , T
   &ESFITET:
(* PROCEDURE GOMEDULES SUPMODDLE PROCEDURE PSSE *)
In Education 11 Them
 98.61
  FEMFOLSTE 11 14 FALSE)
  Relemandle MELS + SENSOR + AND + GPS + PROCESSING + R + NET;
ELD;
TE ECOEMISTE 21 THEY
3E611
  SE EPLSTI 21 := FALSE;
  95+1+9FST+OF+4SE;
5.4.1
TR EBUTPLOTE 31 THEM
SEGI :
  EEFERUSTI 31 := FAUSE;
  355144T09:
F 7.
IF ESDEPLACE OF THES
MEGI
  FETERLALT OF THE FALARY
  EESTOP:
IN EFERMISTE OF THES
 103-
  FEREFLATT 5) := FALSE;
  EENEMUC:
Ent:
TREFIT OF STEER FOR THEM
f\in G(\Gamma)
  Springert et := FilisE;
  1 2 41 1 1
```

17-Mar-1983 17142151 17-Mar-1983 17:19:39

VAX-11 P DISKSUSE

```
€ 10.00 €
   TR EFORMISTIN 7) Them
    HEGI"
           FLOEFLETT 71 :# FALSE:
          SSE arigg
  5401
 (* FIMAL FURE FOR MAGGEDURE SCHEDULFR - KISF *)
 ENG
£ 40 €
(* SIMULATION EXECUTIVE MOUNTE PROCEDURE RISE *)
 VAXAS
PROCEDURE LEXEC:
MEGTA
        OC MARIAS TOU SILES
            BEGT & ECSOPED END
Eri 3
(* SIMULATOR MATA PROGRAM PISE *)
 (Annumentable COPE FOLLUAS members mem
SE GIA
     SET ITIAL:
        EFXEC:
 49961
ťΩů.
```

Source Listing

E-175

APPENDIX F

VAX NOTES

Installing REVS on the VAX

The VAX 11/780 version of REVS was received as a magnetic tape containing command files for the installation and execution of REVS as well as source, object and executable files. A short installation guide accompanied the tape. The following is a discussion of the problems we encountered.

Most of the command files for installation included compilation and linking commands for a particular segment of the system in one file. On our system, re-linking the modules was necessary but recompiling them was not. These command files had to be split into two files each to be useful. The object file [REVS.CWS] SEMAGEN.OBJ did not exist on the tape. Recompilation of this module produced system compilation warnings.

Several system dependent features have been included in the code and command files. Only one of these was mentioned in the installation guide. NEWDISK.COM contains editing commands to correct the disk name on which [REVS] resides. To use it one must be sure the system recognizes the symbol EDT as a command to use the EDT editor. (Our system normally recognizes EDIT/EDT). Some of the command files used to run the programs try to mail a message to user ID [PTCDDP]. No explanation was given for this so all references to this ID were removed from the files, since each run produced an error message for attempting to send mail to a non-existent user.

Before building the nucleus data base, the file NUCLEUS.TST must be modified to include all of the required comment statements. Otherwise error messages are generated and the data base produced is incomplete.

The BATCH execution command file RUNREVSB.COM (created by REVSPRE) assigns ZZ to SYS\$OUTPUT. This means that the BATCH log file, which contains accounting information and system error messages, disappears. This assignment can be removed in REVSPRE.FOR if the BATCH log is desired.

There is no provision in creation of the execution command file for time limits. If the data base pointers are incorrect (i.e. if the system crashes while execution is occurring) during the next run the program may run forever (or until someone gets suspicious enough to stop it).

Upon completion of a BATCH run a message is mailed to [REVS] indicating that the run is finished. Since the program is run from some other ID, REVSPRE.FOR must be modified to send the message to the actual originating ID if such a notification is desired.

Before any operations are done, the data base is copied into TAPE2.DAT. This file is then the one that is updated. The problem with this is that the real name of the input data base is not documented for BATCH runs.

In order to reduce page faults in this version, two modules of the DBCS library were modified. BLKPRO2.FOR was changed from

COMMON/PAGE/PAGE(102400)
DATA MPICOR/200/

COMMON/PAGE/PAGE(512000)
DATA MPICOR/1000/

and BLKFIX.FOR from

DATA NPAGES/200/ to DATA NPAGES/1000/. These modules are linked with MAINREVS, MANDDLA, MANDBIN, and VVDBLDR.

A HELP file was included which must be added to the System HELP library. However, it is not accessible from within interactive REVS (where there is likely to be a need for help) but only from the System level. The file merely contains a short version of the User's Guide.

If the VAX version of REVS is to be distributed, several changes are needed in the installation procedure. First, all system dependent features (such as disk and ID names) should be removed from both the code and command files. Obvious errors and omissions on the tape must be corrected so that the files are consistent with REVS operation.

Each step in the installation procedure should be implemented as a separate command file with complete explanation of what is being done. This would help to find any errors or problems at the time of installation. Command procedures created by the program should also be explained and referenced to the creating module(s). This would allow the user to choose such things as whether or not to have the BATCH log printed.

The data base management portion of the system should be updated to inculde new or more efficient features. Updates on this and other new features should be sent to all users.

A provision for limiting execution time should be added to eliminate the possibility of bad pointers causing excessively long, erroneous runs.

A HELP function should be made available from any point in the interactive REVS environment. If a scratch data base (TAPE2.DAT) is to be used, it should be transparent to the user. That is, reports and other output need to include the name of the actual input data base file. In addition, provision should be made to output the modified data base to a new file named by the user.

Finally, there should be a <u>complete</u> test case including input, output and instructions for running <u>all</u> phases of REVS. If any commands are not implemented, this should be noted as well as plans, if any, for accomplishing this.

Miscellaneous Notes

The following are random observations based on using the VAX version of REVS.

- o REVS does not understand lower case letters. All commands must be input in capital (upper case) letters.
- o The phases of RADX referred to in the documentation do not exist in the VAX version. All pre-defined sets are in one package.
- o Caution should be exercised if using the Unix (1) editor. Tab characters may be inserted by the editor which REVS does not recognize. The ASSM does not accept the information but if the tab causes the line length to exceed the maximum, the line will be truncated and hence information will be lost.

APPENDIX G

DESIGN QUALITY
MEASURES

Introduction

For several subsystems of the Advanced Sensor Exploitation Test (ASET) system, designs were produced from the specification and from the SREM output for comparison purposes. The design methodology was as required by the Martin Marietta Denver Aerospace Software Engineering Standards Manual. Design quality was measured using the complexity models of McCabe and Myers.

The goal of software design is to produce reliable software in a systematic manner. Reliability is defined as the probability that a program will run for a given time before an error of given severity occurs [MYER75]. Reliable software should be simple, modular and understandable so that errors are minimized and those which do occur are easier to locate and correct. A less complex program is therefore a more reliable program and a complexity measure is an indirect measure of reliability.

Several complexity models have been developed to measure the reliability of software systems. The most reliable designs minimize complexity by the use of small, highly independent modules with high module strength (performance of a single function) and loose module coupling (data shared by formal parameter passing techniques). McCabe's method measures the modules for internal complexity (strength). Myers' measure deals with inter-module dependencies (coupling, modularity). These measures were applied to the designs from RSL and from software specification. However, there are probably too few data points data points to justify drawing any definite conclusions.

McCabe's Measure

In examining the complexity of our designs, we are interested in knowing how much more difficult one design is to understand over its alternative. The more complex the design, the more difficult it is to

comprehend and hence, there is a greater chance for induced error during translation to the next life cycle phase. McCabe defines complexity as the minimum number of paths through a module that can be used in linear combinations to form all possible paths through a module [MCCA76]. Hence, the more branch or decision points a module has, the more complex (and less reliable) it is. A simple measure is to count the number of decision points in a module. This measure is known as the cyclomatic complexity number, or v(G). McCabe goes further to suggest that v(G) should be less than ten for a module to be considered reasonably understandable. Values of v(G) greater than ten suggest that the modules may be far too complex.

The original McCabe's measure counts one (1) for the module and one (1) for each branch or decision point except the DO CASE construct which counts the number of branches in the case minus one. (A decision point is an IF-THEN-ELSE, a DO-WHILE, a DO-UNTIL or a DO-CASE design construct.) A modified McCabe's measure counts one for the module itself plus one for each decision point.

As the designs from RSL and the specification were being prepared, v(G) was also calculated. Although comparisons of v(G) on a module-by-module basis may be interesting, they cannot be valid. If and only if the functional decompositions of both designs were exactly identical could a module-by-module comparison be valid. This was not the case, however. For our purpose, it is more reasonable to compare the average v(G) values and the v(G) values for each subsystem considered as a whole -- a system level v(G), as it were. The measure can be calculated from the module level v(G) values and is also defined in [MCCA76]. Note however, that the limit of ten does not apply to a system-level v(G). A value of ten or less would imply a system with so few paths through it as to be trivial.

The results of our calculations are shown below. For each subsystem the average and system-level v(G) values are shown:

Subsystem	Average v(G)		System Level v(G)	
	From RSL	From Spec	From RSL	From Spec
CSID	6.44	14.40	99	68
ASE	5.23	3.00	111	35
c ³ 1	5.50	3.31	19	31
NELS	2.33	3.22	9	41
MTI	2.00	3.17	9	27

Table
McCabe's Cyclomatic Complexity Measures

Myers' Measure

The term modular is applied to "a program that has been structured into many highly independent parts or modules" [MYER75]. The modularity measure described by Myers was applied to the designs produced for the ASE, C³I, MTI and NELS subsystems from both of the design methods.

The Myers' method produces a symmetrical matrix describing the dependencies among the modules of a system. This is called a complete dependence matrix and is derived as follows.

The first step is to derive the first-order dependence matrix by constructing a coupling matrix C of the same dimension as the number of modules. C_{ij} represents the coupling between modules i and j. $C_{ij} = C_{ij}$, $C_{ij} = 1$. The values are determined from the following list:

Type of Coupling	Description	Matrix Value
Content	One module makes direct reference to contents of another.	0.95
Common	Both reference shared global data structure such as a data base or external file.	0.70
External	Both reference shared data item in external data base or file.	0.60
Control	Calling module passes data which is used to control execution of called module.	0.50
Stamp	Reference same data structure (not global).	0.35
Data	Share data by formal parameter passing (i.e. argument list).	0.20

The next step is to consider the individual modules and evaluate the internal strength of each. Strength values are determined as follows:

Type of Strength	Description	<u>Value</u>
Coincidental	No relationship amongst the functions in the module.	0.95
Logical	Logical relationship between elements (example: executive)	0.40
Classical	Logical and time connection between elements (example: initialization).	0.60
Procedural	Multiple functions related with with respect to procedure of problem.	0.40
Communicational	Elements of module use same dat	s. 0.25

Informational Package of functional modules. 0.20

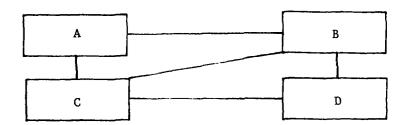
Functional All elements are related to the 0.20 performance of a single function.

The first order dependence matrix is then computed from:

$$D_{ij} = 0.15 (S_i + S_j) + 0.7 C_{ij}$$
 $C_{ij} = 0$
 $D_{ij} = 0$
 $C_{ij} = 0$
 $C_{ij} = 0$
 $C_{ij} = 0$

The resultant matrix can be described as an undirected graph, where the modules are represented by nodes and the edges represent non-zero matrix elements. This matrix only shows the dependencies between modules which are adjacent in the hierarchy of the system. The complete dependence matrix will include the relationships between all of the modules.

To understand the complete dependence matrix, consider the system shown below.



If module A changes there are three possible paths by which module B could be affected (A-B, A-C-B, A-C-D-B). The probability of a change in A requiring a change in B is the product of the edges (non-zero values for the first order matrix) in the path.

Derive the complete dependence matrix by, first, finding all paths (and probabilities) between modules i and j. If there is only one path $E_{ij} = E_{ji} = P(x)$, where P(x) is the path probability. If there are two paths, $E_{ij} = E_{ji} = P(x) + P(y) - P(x) P(y)$. If there are three or more paths, choose the three largest probabilities. Then $E_{ij} = E_{ji} = P(x) + P(y) + P(z) - P(x) P(y) - P(x) P(z) - P(y) P(z) + P(x) P(y) P(z)$. $E_{ij} = 1$.

The sum of all of the elements in the complete dependence matrix divided by the number of modules yields an overall design measure. This measure is actually the expected number of modules that must be changed given that any random module changes (including the module itself). Again, the smaller the measure is, the better the design.

In order to facilitate meaningful comparison between the Myers' measures of systems with greatly different numbers of modules, some indication of the dispersion (error) in M is needed.

$$M = \frac{1}{n} \quad \sum_{i=1}^{N} \quad E_{i}$$

where

M is Myers' measure

n is the number of modules

N is n²

E is an element of the complete dependence matrix.

Since M is functionally dependent on the E_{i} 's, the expected error in M is

$$M = \left(\frac{\delta M}{\delta E} \right)^2 (\Delta E)^2 \right)^{\frac{1}{2}}$$

$$= \left(\frac{\Delta n \Sigma E}{\delta E} \right)^2 (\Delta E)^2 \right)^{\frac{1}{2}}$$

$$= \left(\frac{1}{n} \Sigma \frac{\delta E}{\delta E} \right)^2 (\Delta E)^2 \right)^{\frac{1}{2}}$$

$$= \left((n)^2 (\Delta E)^2 \right)^{\frac{1}{2}}$$

$$= n \Delta E$$

If ΔE is the standard deviation of E

$$S_E = \left(\frac{1}{n^2 - 1} \sum_{E} (E - \overline{E})^2\right)^{\frac{1}{2}}$$

then M can be interpreted as n S_E .

The table below shows the results of the application.

Subsystem	RSL Design	Specification Design
ASE	3.83 <u>+</u> 18.23	6.28 <u>+</u> 13.85
c ³ ı	1.50 <u>+</u> 5.05	2.21 <u>+</u> 6.57
NELS	1.66+6.01	1.85+8.77
MTI	1.72+7.41	1.76+8.41

Table G-2 Myers' Modularity Measure

The Myers measure represents the probable number of modules one must alter in order to implement a change in the design. The lower the number, the more modular the design, and therefore the better the design. The application of the Myers Measure to the ${\tt C}^3$ I, MTI and NELS subsystems

resulted in nearly equivalent measures. This was expected due to the relatively simple subsystem constructs and simple designs generated from each design method. The ASE subsystem results were surprising in the sense that intuitively the ASE subsystem design from RSL is much less modular, or more interwoven, than the design from specification. We have identified two possible reasons for the resulting modularity numbers for the ASE subsystem. First, the overall Myers measure is determined by the sum of all the elements in the complete demendence matrix divided by the number of modules. The external accesses are dominant in the dependence matrix value and the number of modules in a design greatly affects the final modularity value. The number of external files accessed (18) is the same for both designs, but the number of modules is not close (54 for the specification design and 160 for the RSL design). Therefore, the resulting modularity values may not reflect valid design-level modularity measures. Secondly, many of the RSL process blocks, 38 to be specific, do nothing but form an output message and do not truly reflect any modularity concerns.

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